THE BOOK WAS DRENCHED

UNIVERSAL
LIBRARY

OU_158711

UNIVERSAL
LIBRARY

OSMANIA UNIVERSITY LIBRARY

Call No. 352.5 F49M Accession No. 21685

Author Finer, H

Title Municipal trading.

This book should be returned on or before the date last marked below.

By the same author

The
Theory and Practice
of
Modern Government

Mussolini's Italy

English Local Government

The
British Civil Service

Representative Government
and the
Parliament of Industry

MUNICIPAL TRADING

A Study in Public Administration

by

HERMAN
FINER

D.Sc. Econ. (Lond.)
Reader in Public Administration
University of London

London
George Allen & Unwin Ltd
Museum Street

FIRST PUBLISHED IN 1941

ALL RIGHTS RESERVED

PRINTED IN GREAT BRITAIN
in 11-Point Plantin Type
BY UNWIN BROTHERS LIMITED WOKING

To
Harold J. Laski
and our second score years of
friendship and colleagueship
at the
London School of Economics

CONTENTS

Chapter — Page

Acknowledgments 11

Introduction 13

Book One
NATURE AND HISTORY

1 General Survey 17

2 Nature and Problems 27

3 History and Controversies 36

4 The Legal Framework 68

Book Two
FACTORS IN PRODUCTION

PART I: CHIEFLY FINANCIAL

5 Inception of Schemes and Counting the Cost 89

6 The Purchase of Supplies, Land and Undertakings 112

7 Loans, Depreciation and Reserves 129

8 Rate Aid and Profits and Losses 146

PART II: ADMINISTRATIVE ORGANIZATION AND PERSONNEL

9 Administrative Organization 163

10 Personnel: Technical and Administrative 198

11 Personnel: Manual Workers 217

PART III: THE SIZE AND TECHNOLOGY OF THE UNDERTAKING

Chapter Page
12 Water 233
13 Gas 250
14 Electricity 258
15 Transport 278

Book Three

FACTORS IN SELLING

16 Pricing 299
17 Gas Charges 308
18 Electricity Charges 330
19 Transport Charges 351
20 Water Rates and Charges 364
21 Stimulation of Sales and Service 383

Book Four

CONCLUDING OBSERVATIONS

22 The Balance of Deterrents from and Incentives to Efficiency 391
23 The Factors of Success and their Development 404
Appendices 422
Index 427

ACKNOWLEDGMENTS

It gives me pleasure to acknowledge with deep gratitude the assistance through discussion and correspondence of Mr. J. D. Imrie, City Chamberlain of Edinburgh, Mr. Sydney Larkin, City Treasurer of Coventry, Dr. A. H. Marshall, Deputy Treasurer of Coventry, Mr. W. Coxall, City Treasurer of Chesterfield, and Mr. Arthur Collins. All of these read the MS. and offered many fruitful comments. In particular, the criticism by Mr. Collins, who has probably the longest and most intensive experience of any person in this country of the undertakings, was invaluable in its volume and point, and I express my profound thankfulness to him for his very great kindness.

I have pleasure in thanking, also, Mr. Ernest Long, the Borough Treasurer of Finchley, Mr. Drummond, the Deputy Treasurer of Smethwick, Mr. E. A. Mills, Borough Electrical Engineer of Hackney, Mr. Westlake, Borough Electrical Engineer of Finchley, Mr. Pugh, Water Manager and Engineer of Coventry; Mr. Beckett, formerly Secretary of the Municipal Transport Association, the Institution of Gas Engineers, the British Commercial Gas Company, the British Electrical Development Association, the Secretary of the Conjoint Conference of Joint Electricity Authorities, the Secretaries (Workers Section) of the Joint Industrial Councils of the Undertakings, and the many officials of the Ministries of Transport, Health, the Electricity Commissioners and the Board of Trade who helped towards enlightenment in discussion or writing.

Among my colleagues at the London School of Economics, Mr. F. C. Benham and Mr. W. A. Coase, read the MS. and gave helpful hints and put disconcerting questions. I profited by the hints, and tried to meet the questions. Mr. G. Schwartz presented steadying comments on pricing.

I thank the following local authorities, whose Town Clerks and Managers of Undertakings answered my questionnaires and sub-

sequent supplementaries where necessary so clearly and at so much trouble to themselves.

Accrington District Gas and Water Board
Ashton-under-Lyne
Aylesbury
Barking
Barrow-in-Furness
Beverley
Birkenhead
Birmingham
Bournemouth
Bradford
Brentford and Chiswick
West Bromwich
Burnley
Burnley, Colne and Nelson Joint Committee
Bury
Canterbury
Cardiff
Cheltenham and Gloucester Joint Water Board
Chester
Chesterfield
Congleton
Crewe
Croydon
Darlington
Darwen
Derby
Dewsbury
Edinburgh
Finchley
Fleetwood
Gravesend
Great Yarmouth
Halifax
Hammersmith
Hampstead
West Hartlepool
Haslingden
Heanor
Helmsley
Hornsey
Hoylake
Huddersfield
Ilford
Ilkeston
Ipswich
Irwell Valley Water Board
Lancaster
Leeds
Leicester
London and Home Counties Joint Electricity Authority
Loughborough
Lowdon
Luton
Manchester
Mansfield
Newcastle-under-Lyme
North-West Midlands Joint Electricity Authority
Norwich
Nottingham
Ossett
Paignton
Peterborough
Portsmouth
Ramsgate
Rawtenstall
Rochester
Sheffield
Southend-on-Sea
Southport
Southport and District Water Board
Stalybridge, etc., Tramways and Electricity Board
Stanley
Stockton-on-Tees
Stretford and District Gas Board
Stoke-on-Trent
Swansea
Taf Fechan Water Supply Board
Wakefield
Wallsend
Walthamstow
West Cheshire Water Board
West Ham
West Midlands Joint Electricity Authority
Widnes
Yarmouth
York

INTRODUCTION

THIS book is concerned with the municipal administration of the four trading undertakings, gas, water, electricity, and transport, mainly in England and Wales. Together these account for 80 per cent of the Trading Services as measured by annual expenditure. It is not intended to enquire whether this or that particular authority has taken a wise decision. To answer such a question would require, as will become apparent, a most minute analysis of the combined historical, personal, local, topographical, national grounds of wisdom and choice in each particular case in each locality. But the character of the task facing local authorities can be stated, and then one can ask whether the organization, methods, and motive forces are such as to make it probable that a wise decision will be reached. It is possible to ascertain whether or not they have the institutions and motives for rationally deciding and exploiting the given economic and technical factors.

Where statistical methods cease to be useful, facts can only be brought home by examples. This raises the problem of steering between an insufficiency and an excess of illustration. Tolerance is begged wherever a point seems to be over-laboured. Exaggeration of the experience of such places as Manchester and Birmingham has been studiously avoided. Moreover, since those who live in sin do not confess it abroad until they have long repented, the examples used may well, perhaps, represent the better than the worse practice. But this reflection ought not, in fairness, to be overrated, since by far the most of the conclusions cover practically all the local authorities.

It would have been possible to adopt a different method of investigation. Several examples, large, medium, and small undertakings, in each of the fields of enterprise, might have been selected for highly detailed investigation. For this, a large research staff, or collaboration between a number of otherwise individual students of the subject, would be necessary. That line is still open. Meanwhile, it was considered to be not entirely without usefulness to make a general study which may suggest the essential lines of enquiry.

Great care has been taken to avoid comparisons with private enterprise, for reasons deducible from Chapter Two, Section B.

The method of exposition has followed the system of factors in the usual industrial and commercial transaction, as can be seen from the Contents page.

The following exposition was founded upon documents and personal contacts and some municipal experience. Statutes, departmental memoranda, rules and orders, and standard legal works formed the first foundation. Parliamentary debates and Committee Reports threw a light on history, aims, and achievements, as also did the reports of Royal Commissions and Departmental and Advisory Committees. Two questionnaires of considerable detail were sent out to many scores of local authorities, and an excellent sample number of answers was returned. Correspondence followed to pursue matters and clear away uncertainties. The year books and diaries of local authorities, as well as the Abstracts of Accounts and the Annual Reports of the Managers to their Trading Committees were examined. The technical and local government periodicals and the reports of the meetings of the municipal professional associations were extraordinarily useful. Many matters were hammered out in discussion with a number of local officials of standing, and with some of the officials of the central departments concerned with the work of local authorities.

THE ANDERSON SHELTER
GREEN LANES
FINSBURY PARK

BOOK ONE

NATURE AND HISTORY

Chapter 1. General Survey
" 2. Nature and Problems
" 3. History and Controversies
" 4. The Legal Framework

Chapter One

GENERAL SURVEY

Between thirty and forty years ago controversy regarding municipal enterprise attained its zenith. Its tones are now subdued.[1] In spite of the magnitude and social importance of the undertakings concerned the problems involved have not been comprehensively surveyed since 1912.[2] For a number of reasons this is hardly surprising, and it is useful to state them.

In the first place, each of the enterprises is gigantic in its operations and territorial spread; and each has its own complicated history and technical constitution and problems. Secondly, the enterprises are managed by scores of local authorities, each possessing individual characteristics, distinguishing its administration from the rest. A considerable research staff would be required to prove or disprove the criticisms or eulogies which used to be prodigally expressed. Even the sifted statistics cannot tell the whole story.[3]

Thirdly, the accent has come to be placed much more upon "trading" than upon "municipal." In electricity, gas, transport, and water, contemporary emphasis is less on the municipality than upon the role of the enterprise in the national economy, defence, and public health. The official enquiries into the first three since World War I have certainly been largely concerned with problems of national industrial efficiency and defensive power.[4] For example, even in the choice between tramways and other forms of transport, which seems at first sight to be so much a matter of local concern, there is evident the deliberate advocacy of the trolley-bus because its motive-power is electrically generated from home-produced coal. Again, in the individual contest between the Barnsley Corporation and the Sheffield Gas Grid for the control of the gas supply of Barnsley, a not unimportant factor swaying the decision in the latter's favour seems to have been the desire to test the merits of a gas "grid" as a producer of cheap industrial fuel.[1] The "municipal" area to which it was in the first place convenient to devolve the utilities has been challenged by technical development. The emphasis tends to be on "public" rather than "municipal" control.

---

[1] Cf. Chapter Three *infra*.

[2] Cf. Knoop, *Principles and Methods of Municipal Trading* (Macmillan, 1912).

[3] Cf. Chapter Two, pp. 31 ff., infra.

[4] Cf. Committees on Fuel and Power, Cmd. 3201, 1928, and Cmd. 3252, 1929; Ministry of Transport, Report of the Committee on Electricity Distribution, May 1936; Report on Gas Prices, H.L. 24191; H.C. 110, 1937 (South Metropolitan Gas Company case).

Fourthly, discussion has been stilled by the success with which, on the whole, municipal enterprise has solved its chief problems. The internal organization of the authorities, the legal standards under which they operate, the ends and means of central control, have been developed to meet successfully the dangers predicted by opponents.

Yet perfection has not been reached; new problems have arisen; and it is time that attention was redirected to the subject. Very large sums of money and great numbers of people, producers and consumers, are involved. The magnitude and operation of the municipal undertakings and their price policies are by no means trivial in the national economy and welfare. Municipal enterprise is also a particular form of enterprise; and the lessons this teaches may be of great significance now that private enterprise has come so extensively under the control of public authorities, and when the form of that control is in a state of critical experiment. Light may be thrown on the vital problem of provision for consumer's control when private enterprise, which operates through control by the individual consumers with effective demand, is limited or abolished.

EXTENT AND SIGNIFICANCE OF MUNICIPAL ENTERPRISE

The list of the Trading Services (see p. 19) as they appear in the *Local Taxation Returns* officially defines their range, and offers the basis for explanation of their significance.

The totals are roughly one-quarter of all local government annual expenditure, including the amounts obtained from rates, grants-in-aid, and the trading services.[2] But it is our intention to deal only with water, gas, electricity, and transport. These four chief services account for about £110,000,000 out of roughly £131,000,000, and of the remainder Harbours, Docks, etc., account for nearly £13,000,000.

Of the total income for the year ending March 31, 1937, it may be observed that £2,525,970 consisted of transfers of money from the rates to make up deficiencies in the various undertakings. Lest this figure should provoke gloomy or cantankerous reflections, it should be observed that nearly one-half of it, namely, £1,240,570 is on account of water supply. The philanthropic element in the supply of water is second only to that on the provision of cemeteries, which are subsidized from the rates by £500,748. Against the transfers from rates to the trading services there are transfers from the trading services in aid of the rates: in this same year the total was £1,643,855. There is a continual rise and fall of this figure as between different local authorities from year to year, sometimes a profit being made, sometimes a loss, but the sums involved are not large. The reasons for the excesses and the deficiencies, and the policy underlying them, are discussed later.

---

[1] From verbatim shorthand report of proceedings before Parliamentary private bill committee, 1937.

[2] Years ending March 31, 1936 and 1937: Rate Fund Services £350,534,186 and £361,482,012 respectively.

ENGLAND AND WALES

TRADING SERVICES

REVENUE ACCOUNT. TOTAL EXPENDITURE*

	March 31, 1936	*March* 31, 1937
1. Water Supply	21,049,125	21,829,354
2. Gas Supply	16,544,647	17,253,879
3. Electricity Supply	43,843,670	48,451,706
4. Transport (Tramways, etc.)	22,404,323	23,220,319
5. Ferries	539,497	430,519
6. Markets	2,586,399	2,535,214
7. Cemeteries	1,759,479	1,840,779
8. Harbours, docks, piers, and canals	13,019,575	13,241,900
9. Miscellaneous	2,498,717	2,688,217
10. Total Expenditure on Trading Services	£124,245,432	£131,491,887
11. General Corporation estates	1,452,026	1,501,807
12. Grand Total	£125,697,458	£132,993,694

* *Vide Annual Reports*, Ministry of Health, 1936–37, p. 282, and 1937–38, p. 270.

It will now be interesting to observe the development in terms of *expenditure* over the last fifty years.

The figures relating to water show a steady but not a sensational rise in the quarter-century preceding World War I. The figures, already large in 1913–14, are doubled by 1933–34. This is accounted for by some transfers of undertakings from companies, increased domestic consumption, especially due to the rise of housing estates, higher standards of housing and the installation of heating arrangements under the influence of salesmanship from the electrical and gas industries (of which the local authorities form a large proportion),

DEVELOPMENT OF MUNICIPAL EXPENDITURE AND INDEBTEDNESS: ENGLAND AND WALES

ANNUAL CURRENT EXPENDITURE*

Year	Water	Gas	Transport	Electricity
	£m	£m	£m	£m
1884–85	0·792	2·429	0·016	Not available
1889–90	0·888	2·822	0·028	Not available
1894–95	1·112	3·566	0·110	0·092
1899–1900	1·530	4·587	1·124	0·570
1904–5	4·827	6·574	4·862	2·481
1909–10	7·362	6·876	4·682	3·522
1913–14	9·135	8·517	10·014	5·195
1918–19	13·143	17·164	20·453	13·358
1920–21	15·605	21·665	25·227	17·875
1922–23	15·08	16·752	22·466	16·027
1924–25	15·84	16·967	22·505	19·117
1929–30	19·02	16·917	26·684	28·596
1934–35	20·538	16·149	21·776	40·340
1936–37	21·829	17·253	23·220	48·451

* Loan Charges included from 1904–5.

LOAN INDEBTEDNESS

Year	Water	Gas	Transport	Electricity
	£m	£m	£m	£m
1879–80	19·06	9·43	—	—
1884–85	30·33	13·77	1·17	Not available
1889–90	37·73	14·85	1·28	Not available
1894–95	43·97	16·93	1·47	1·38
1899–1900	53·40	19·82	5·78	7·853
1904–5	114·70*	23·83	23·31	25·639
1909–10	126·98	23·25	35·97	29·543
1913–14	131·09	22·54	37·72	30·790
1918–19	130·16	20·84	34·38	32·44
1920–21	137·43	21·94	35·80	41·04
1922–23	143·07	24·75	37·45	54·25
1924–25	148·06	25·24	37·89	63·88
1929–30	163·26	27·86	38·46	106·54
1934–35	169–77	25·42	28·68	169·78
1936–37	171·69	24·46	26·87	148·67

* From 1905 includes M.W.B.

and advancing standards of personal hygiene.[1] Another cause is the rise in prices, phenomenal in the War years and immediately afterwards, but still today a little over 50 per cent above the index figure for 1914. The consumption of water has rapidly increased and is still increasing.

Committees that have enquired into the situation since the first great post-War enquiry by the Water Power Resources Committee[2] have all emphasized with anxiety the growing demands, domestic and industrial, for more water. Owing to the lack of compulsory governmental returns, it is not possible to give annual national totals, and the British Association of Waterworks Engineers which has assumed the task of collection does not provide them either. Therefore some indication of growth is best given by a few individual examples.

CITY OF WAKEFIELD*

Year	City			Out-districts			Whole area
	Population	Daily consumption (1,000 gals.)	Galls./head per day	Population	Daily consumption	Galls./head per day	Galls./head per day
1901	41,552	1,475	35·50	96,249	1,060	11·01	18·4
1911	51,598	1,571	30·44	108,943	1,325	12·16	18·0
1921†	53,600	1,578	29·44	104,000	1,737	16·70	21·03
1930–31	56,970	1,758	30·86	114,150	1,899	16·67	21·37
1937–38	59,250	2,038	34·39	100,000	1,871	18·71	34·54

* Report. Engineer, City of Wakefield, March 31, 1938.

† Year of drought, supplies curtailed.

---

[1] Mr. J. R. Davidson, former Engineer to the Liverpool Corporation Water Works, in a paper written in 1931 (communicated), showed noteworthy connections between the quality of dwellings, hot-water installations and the amount of water used. "As soon as we come to post-War dwellings, mostly erected by local authorities, it is found that a family transferred from an old type house in which they were satisfied with 6 to 7 gallons per head, jump at once to a consumption of 20 gallons, and after a year or two settle down at a rate of about 23 gallons per head per day." He gave average figures of the fitting baths in dwelling-houses for several industrial towns in the Midlands and the North:

Year	*Percentage of houses supplied and fitted with bath*
1894	5
1904	10
1914	20
1924	24
1930	30

[2] Board of Trade, Final Report of the Water Power Resources Committee, November 1921.

SOUTHPORT AND DISTRICT WATER BOARD*

Year	Supply, including bulk to other authorities (1,000 galls.)	Bulk to other authorities (1,000 galls.)	Number of houses supplied	Population	Per head per day	
					All purposes	Domestic and unmetered
1903	770,677	—	16,528	79,748	26·65	19·05
1913	938,748	48,363	19,081	87,257	28·04	21·16
1923	1,096,557	56,689	20,281	92,278	31·06	24·35
1933	1,283,299	45,488	26,285	107,770	31·95	24·44
1938	1,380,735	48,160	30,677	119,640	30·84	24·75

* Reports and Accounts, March 31, 1938.

OSSETT CORPORATION*

Year	Total consumption (1,000 galls.)	Population	Approximate galls. per head per day
1891	58,581	10,984	14·6
1901–2	105,505	12,903	22·2
1910–11	130,385	14,078	25·9
1920–21	145,966	14,801	26·6
1930–31	154,185	14,834	28·1

* *Year Book*, 1939.

To illustrate development and the advent of serious planning problems we give for Manchester figures of amounts only, Manchester itself being a vastly different entity at the different dates.[1]

ANNUAL CONSUMPTION IN THOUSANDS OF GALLONS

Year	Domestic	Trade, etc.	Bulk	Total
1929–30	10,260	6,518	2,904	19,682
1930–31	10,592	6,333	2,920	19,245
1931–32	10,753	6,445	2,829	20,027
1932–33	10,471	6,633	2,903	20,007
1933–34	10,424	6,769	3,075	20,328
1934–35	9,183	6,168	2,903	18,254
1935–36	10,542	7,014	3,046	20,642
1936–37	10,721	7,419	3,113	21,253

---

[1] Shena W. Simon, *A Century of City Government*, pp. 351–55 (George Allen & Unwin Ltd.).

Year	*Supply per day in million galls.*
1855	8
1868	21
1900	32
1928	57·35 (15 per cent being bulk)

In the case of gas, there is a steady but not a big development in the quarter of a century preceding the War. By 1918–19, and even more so by 1920–21, there is a peak in the rising curve of expenditure, from which there is thereafter a steady recession with slight annual fluctuations. But the figure today representing the end of the curve is still double what it was in 1913–14. The peak of the curve is explained by the very large increases in costs of production, particularly in the price of coal,[1] and all that apparatus for the making of gas, which itself depends largely on the price of coal.[2] But the steady increase observable underneath that peak is due to remarkable advances made in the technique of production and distribution and the stimulus of competition from electricity and oil fuels. Improved technique and better service have caused a certain reduction in the quantities consumed simply because, in order to commend itself to consumers, the industry has been obliged to devise more economical methods and apparatus of consumption. In 1913 local authorities were selling 76,299 million cub. ft. of gas; in 1924 92,297; and in 1938, 112,781.

The development of electricity is, in contrast to water and gas, sensational. For the year 1884–85 the figures of expenditure are practically nil. Local authorities had commenced operations, but as we show later, both technical and statutory conditions of supply were not conducive to enterprise. In 1894–95 local authorities were spending about £100,000 on their electricity undertakings. By 1904–5, when the law had been amended to make operation easier and technical discoveries in relation to generation and supply cables had been made, round figures had leapt to £2,500,000. Thereafter the growth is astounding.[3] By 1913–14, that is in one decade, the figures doubled. By 1918–19 they nearly trebled again (but we have to remember that the terrific rise in costs modifies our notion of the rise in terms of output); by the latest year, that is 1936–37, the figures of expenditure are nearly four times what they were at the end of the war. In 1913 municipal undertakings sold 897 million units; in 1924–25 3,268; and in 1937–38 12,121. From merely being a very convenient form of lighting, electricity has become a very effective competitor of gas for heating and power, and has, further, the great advantage of use for radio reception.[1]

---

[1] For example, Stoke-on-Trent paid per ton of coal (on the average) for gas manufacture: 1911, 11s. 2d.; 1921, 41s. 8d.; 1924, 26s. 11d.; and 1937–38 22s. 11·15d. Cf. Annual Report of Chief Engineer and General Manager of Gas Department, Stoke-on-Trent, March 31, 1938.

[2] Modified by the fact that improved carbonization processes give a greater yield of gas per ton of coal: an average of 12,233 cub. ft. in 1920; 14,451 in 1930; and 15,063 in 1935.

[3] It applies, of course, equally to electricity supplied by companies.

Municipal transport began with horse-drawn or steam-drawn trams and advanced to electric traction; just before the War came the first experiments with trolley-buses; and after the War, motor omnibuses and trolley-buses came as substitutes for and supplements to the tramways. Before the beginning of the 20th century, local transport was almost exclusively private enterprise. The Tramways Act of 1870 did not give municipalities the power to manage the tramways; but an option to buy them out after twenty-one years. There is, therefore, a great jump in figures from 1894–95 to 1904–5. Thereafter it is a question of the further extension of municipal ownership and management, additions to the mileage, the addition of new services like the trolley-buses and motor-buses, and the expansion of accommodation in the vehicles by new designs (for example, double-deckers). The substitution of electric for horse traction had stimulating effects upon electric undertakings.

Certain other statistics show the full social and financial significance of municipal trading. Water undertakings are conducted by 838 public authorities, that is to say, single local authorities to the number of 790, and 48 joint bodies. These supply a population of about 27,000,000, which is two-thirds of the total population of England and Wales; while private enterprise supplies about 6,000,000 people. The Gas Supply of the country is in the hands of 235 municipal undertakings and 402 private undertakings;[2] the former supply about 3,170,000 consumers, the latter just under 7,000,000 consumers.[3] In other words, one-third of the gas consumers are supplied by local authorities. About 963 million therms of gas were sold by private undertakings in 1937, as against some 417 million therms sold by local authorities. Of the authorized Electricity Undertakings, 339 are municipal authorities, and 210 companies and persons.[1] It is not possible to give the number of consumers in each case, but the official returns made to the Electricity Commissioners show that of the total units sold the local authorities supply approximately 65 per cent. In the field of transport in 1937–38, local authorities manage 62 tramway undertakings as against 16 by private undertakers, with passenger-journeys per year amounting to 2,246,696,890, as against 110,774,028; and trolley-bus services are in the hands of 54 municipalities against 5 in the hands of private enterprise, and passenger-journeys compare 432,972,548 for the former and 63,878,368 for the latter.[2] As to buses, for reasons explained later, local authorities as yet play a minor role. In the year 1936–37 they administered nearly 20 per cent of the total public service vehicles owned; took nearly 25 per cent of the receipts; and carried 41 per cent of the passengers.[3]

---

[1] The advance of gas and electricity as fuels has been at the expense of coal.

[2] This takes the basis of the Board of Trade Returns. These returns include all undertakings authorized by Act of Parliament or Order. It does not include any non-statutory undertakings, of which there are many. The non-statutory undertakings are mostly very small, and altogether they represent about ½–¾ per cent of the total gas supplied in the country. Among the companies are the Gas Light & Coke Company and the South Metropolitan, which between them supply 20 per cent of total national production.

[3] Board of Trade, Return relating to all Authorized Gas Undertakings, 1937. The figures relate to England and Wales.

Naturally, this remarkable expansion of municipal enterprise could not possibly have occurred without the provision of capital. The gross outstanding loan debt was £475,724,967 in 1936; and £484,495,545 in 1937. It is divided among the trading services as follows:

	March 31, 1936 £	*March* 31, 1937 £
1. Water Supply	170,353,624	171,687,631
2. Gas Supply	24,945,468	24,459,091
3. Electricity Supply	140,419,536	148,674,299
4. Transport	27,118,981	26,870,344
5. Ferries	1,708,515	1,155,453
6. Markets	8,389,223	8,525,114
7. Cemeteries	2,798,874	2,881,286
8. Harbours, docks, etc.	97,105,774	96,641,817
9. Miscellaneous	2,884,972	3,600,510

Later discussion indicates how far this debt represents assets. Every year a considerable proportion of the national investment goes to municipal undertakings. The average amount of national capital investment (gross fixed capital) over the period 1929 to 1935 is about £593,000,000,[4] while the amount of annual investments in local government services generally is about £104,000,000. Of the latter sum, about £27,000,000 annually flows into the trading services.[1] Thus all local government investment is about one-fifth of the national total, and the trading services a little under one-twentieth.

---

[1] Electricity Commission, Return of Engineering and Financial Statistics . . . for year ending March 31, 1937.

[2] Ministry of Transport, Tramways and Light Railways and Trolley Vehicle Undertakings, Returns Local Authorities year 1937–38; Companies year 1937.

[3] Calculated from Garcke's *Motor Transport Yearbook*, 1938.

[4] Cf. Clark, *National Income and Outlay* (1937), pp. 167 and 185. This includes "work of construction, installation, maintenance and repair done on buildings, plant and machinery, transportation, equipment and roads, telephones and telegraphs, gas, water and electricity supply equipment."

One other set of figures must be given: the number of employees engaged in the municipal undertakings. According to the Fifth Census of Production, 1935 (Preliminary Report), which gives the latest comprehensive information for Great Britain, gas undertakings employ 118,671 of which local authorities a little over 34,000, water undertakings nearly 31,179 of which some 24,000 were municipal employees, electricity undertakings 102,157 of which 63,276 come under municipal employment, tramways and omnibuses in 1931 some 76,000 out of 188,000, but nearly 102,000 were in private "bus" undertakings.[2] The total is over 226,000, and to this should be added the employees in the undertakings not named in this list, and a share in the administrative staffs of the departments, like the Town Clerk's, the Treasurer's and Accountant's, some part of whose costs are allocated to the debit of the undertakings (quite properly), but a proportion of whose numbers is not ascribed to those directly employed in the undertakings. The total is equivalent to about a quarter of all those engaged in local government; to one-eighth of all those engaged in public administration, whether central or local; and about one in seventy of all the gainfully-occupied people in the country.

These figures of enterprise in terms of expenditure, debt, numbers of consumers and numbers employed, are of an important magnitude in the national economy.

[1] Computed from *Local Taxation Returns*.

[2] In 1938 there were 211,080 insured persons in *all* tramway and bus services.

Chapter Two

NATURE AND PROBLEMS

(*a*) MOTIVE AND THEORY

To explain the development of municipal trading as the exclusive result of recognition of certain truths of economic theory would be to introduce a clarity which did not in fact exist. Even now it would be rash to say that more than a very small proportion of administrators, especially the elected councillors when unprompted, appreciate the fundamental economic concepts. Hence, this description of the nature of the municipal utilities attempts to reproduce the social outlook as well as the economic reasoning involved.

In the first place, the trading undertakings have a more than ordinary importance in the routine of economic and social life. Many attempts have been made to give a more precise expression of the intensity of their importance, but however the definitions wind about and about, there is no quantitative assessment possible.[1] When the majority have acquiesced in the view that there is some special urgency in the supply of a commodity or service, essential to production or consumption, the authority of the State is introduced where independent producers do not satisfy the majority's standards.

This does not mean that the nature of essentiality is unique and simple. If we take the example of water, a number of elements are involved, which, when combined, make public, if not municipal, management irresistible. Some water is necessary to sustain life itself; there is the vital dependence of industries on assured supplies; modern health requires vast quantities of running water. And there are analogous compulsions in gas and electricity undertakings. Society comes to claim these forms of light and energy as though they were indispensable foundations of our consumption and productive methods. So, finally, with the need for regularity, certainty, and speed in the sphere of transport, where the demands for pleasure combine with the demands of production.

Reflection on these services shows that it is felt imprudent to trust the individual or joint-stock entrepreneur operating under the incentive of private profit. His sense of responsibility to the community is thought to be governed only by the profit-and-loss motive, and any casual moral addition thereto which the producer voluntarily decides to make. At the margin (which cannot be described or predicted with arithmetical clarity) where that moral addition fails to satisfy the social standards and the economic necessities of the case, the demand for public control is pressed. The history of the services taken over by the municipalities; the situation at the time, the technical nature of the service in question, and especially the results of unregulated competition, offer concrete evidence of these propositions.

---

[1] Benham, "Economic Significance of Public Utilities," *Economica*, November 1931.

Economists are impatient with the explanation of the "urgency" of a utility. They rightly point out that many other commodities may be said to be as "urgent" as gas, electricity and water and transport: for example, shoes and clothing in general, or the staple foods. They rest the argument for public, though not necessarily *municipal* control, on other considerations.

First, the utilities which have been municipalized are those which involve large capital compared with operating costs. For water supply great reservoirs, water-mains, pumping stations, filter-plants, and so on are needed. Tramways require the road, the track, and very expensive equipment like the cars. Gas and electricity entail extraordinarily high costs for the generating plant and the network of pipes or cables specially adapted to their area. The degree of attractiveness of investment depends on exclusive exploitation of the local body of consumers. This prevents competing producers from being tempted to enter the field, with the protection that competition gives to consumers. Further, expensive, specific capital is not easily transferable into or out of the area. Again, the services themselves are not easily transferable beyond the locality, even if at all. These are the characteristics of a "local monopoly." The economic and subjective costs to consumers to move away to another area are so severe as to subject them to the monopolist.[1] Until the monopoly eventuates there is social waste; when it functions the consumer is at the mercy of the producers. This is amply borne out by the shocking history of the gas and water companies in the London area in the middle of last century, before Parliament intervened.

Nor is this all. These industries have further special inherent economic characteristics which distinguish them from other industries. The service they supply has an element of *non-transferability.* In free competition, or even in the case of simple monopoly with restriction of entry of more producers into the market, any attempt by one seller to discriminate between two sets of purchasers in the prices charged for the identical commodity would lead to the group in whose favour the price differentiation was made, contriving to resell to the other group. In the case of a tram ride, however, we are concerned with a service transferable directly by the seller to the consumer. The unit of demand for the service is *physically* non-transferable, and no middleman device could be adopted to offset any discrimination between consumers.

---

[1] Conversely prospective tenants may be attracted into an area by the low costs of the services, that is, where they are so low as to overcome all the costs of removal.

The same difficulty would be encountered in the case of water. Water in the well is not the same thing as running water in the tap. The modern consumer desires running water in his home. If price differentiation took place in the case of water thus supplied, the consumer suffering from discrimination would be at great disadvantage, since he wants not merely the physical phenomenon, water, but a running supply of water coming through his tap to him: and *this* is non-transferable.

Again, the individual consumer cannot in general store electricity and gas, as he might store bottles of milk if these were sold cheaper at one time of the day than at another. Any discrimination at different times in prices practised in regard to electricity and gas charges could not be met and defeated to the same extent by the consumer as in the case of milk supply.[1]

It is easy to see, therefore, that in the absence of appropriate public safeguards, price discrimination would take place. It is interesting to note that the House of Commons Committee of 1821[2] recognized this. "... Your Committee are satisfied that from the peculiar nature of these undertakings the principle of competition requires to be guarded by particular checks and limits in its application to them....

Competition, in ordinary cases, adjusts the supply and the demand through the liberties which the sellers have to go out of the market as well as to come into it; but in trades carried on by means of large capitals, vested in fixed machinery, and furnishing a commodity of no value but for consumption on the spot, the sellers are confined to the market by the nature of the trade."

---

[1] Mr. Chantler, in his study, *The British Gas Industry* (1938), p. 66, makes the ingenious comment: "It is conceivable that if the technique of supplying gas in portable containers, employed by some early companies, had proved generally superior to distribution through fixed equipment, or if it were practicable for individual consumers to buy their gas ex works, and carry it away in bladders as Dr. John Clayton carried the coal gas he made two hundred and fifty years ago, conditions of local monopoly in gas supply would not have developed."

[2] B.P.P., vol. v, p. 3.

As history had already furnished municipal administrative units, they offered Parliament a convenient agency through which the desired public control could be exercised. Municipal bodies and public-spirited men and women found it natural to urge that they should represent the public. Certain other factors caused municipalities to ask for the power to own and manage. Many local authorities were strongly influenced by the hope that a profit might be made on an undertaking to accrue to the advantage of the general rate fund for the development of the social services. Others wanted the right to open up roads and streets, and to interfere with person and property, involved in the undertakings, to be exercisable only by the community.

There is, again, a devotion to the community itself which causes some people to wish for the establishment of social standards by the community, and desires more power put into the hands of its elected representatives. That particular element is clearly observable in the recent attempt of the Barnsley Corporation to take over the gas supply from a private undertaking in the area. The evidence[1] showed that, on the whole, the corporation could hardly do better economically than the private company, the Sheffield Gas Company to whom it was proposed to sell the existing undertaking, but the Corporation persisted owing to the feeling that the community ought to control. This is part of a larger ideal that transcends the municipality. Since World War I one seems to notice a change in the attitude of local authorities in this respect. Some have come to the conclusion that if there are governmental safeguards for "reasonable" service to the consumers at "proper" prices, it is just as well if the monopoly is managed by private or mixed enterprise. This is observable particularly in the transfer of gas undertakings to private enterprise.

Some advocates of municipal enterprise argue that even if their management were economically less efficient than private enterprise, there would be still a strong case for municipal administration on grounds of justice in the conduct of the concern. They believe that the whole economic process has as its purpose the provision of the material basis for all the many alternative satisfactions which human beings desire. Among those satisfactions are the feelings of fair and decent working relationships, a relief from the anxiety due to insecurity, an exclusion of privileges such as advancement based upon a superior social status, provision for a due ventilation of grievances, and some deliberative part in the general conduct of the enterprise. In municipal enterprise various controls and safeguards have been instituted to subdue the reputed ruthlessness of competitive enterprise. These controls may have the effect of slackening the drive of administrators and employees in municipal undertakings. An increase of costs to the consumer, if not offset by lower salaries and wages compared with workers in other industries, is the probable consequence of an unrigorous works discipline. It is very difficult to tell from observation, and the evidence is different from different municipalities. On the other hand, there is the direct gain in the humane conditions. That gain is not susceptible of arithmetical calculation, and therefore it will not be found on the credit side of municipal trade accounts; but it ought to be there.

---

[1] Verbatim report made available to me.

We revert to the question of whether a concern for the consumer necessarily demands the full ownership and management of a service by the municipality. Is not a form of control over private enterprise sufficient to secure this? The answer is that in the past no fully satisfactory system of control has been devised.[1] There has been far less experimentation in such devices in this country than in the United States of America, where it is the rule for the municipality to give franchises to private undertakings and then subject them to the control of Public Utility Commissions.[2] Their history is a shocking record of litigious, crafty, and sometimes gangster methods of escaping control. In England it has been possible to trust local authorities with the actual management, and on the whole the result is far better for the consumer. However, progress has not yet resulted in perfection.

(*b*) THE DIFFICULTY OF STATISTICAL CALCULATION OF "SUCCESS"

Comparisons of the "success" of municipal and private enterprise have been avoided as much as possible in this study, for the reason that they are practically impossible. Comparisons between one municipal utility and another are also practically impossible.[3] The reasons for this need statement.

---

[1] Cf. Knoop, op. cit., pp. 23–36.

[2] Cf. Mosher and Crawfurd, *Public Utility Regulation*, Harpers, 1934.

[3] Cf. Pigou, *Economics of Welfare*, edn. 4, p. 385. "Another negative proposition of a general character may be set down. This is that attempts to conduct a comparison by reference to statistics are foredoomed to failure."

By "efficiency" or "success" is meant the capacity to satisfy demand. In a competitive market the comparison of the efficiency of several undertakings is relatively simple. Given the framework of law and the distribution of income, undertakings which remain in production can be said to be "more efficient" than those which become bankrupt, and those which show a larger surplus of revenue over costs can be said to be "more efficient" than those with a smaller surplus. These propositions follow from the significance which costs and revenue have in competitive conditions. Costs measure the alternatives foregone in the production of a particular commodity; receipts measure the satisfaction which the commodity yields. Improvements in efficiency are reflected in price reductions. Efficiency is therefore comparable with the aid of statistics of prices, costs, and profits.

Public utilities, whether municipally or privately owned and managed, are, however, local monopolies. Costs are not competitive, but are inflated over the competitive level: money costs, therefore, are only a *formal* measure of foregone alternatives. Prices are not competitive, and therefore not, by themselves, a sufficient indication of satisfactions; surpluses of revenue over costs are no longer a function solely of efficiency. Statistics of costs, profits, and prices therefore cannot be of decisive value in a comparison of the efficiency of public and private undertakings.

The absence of competitive conditions shows itself in a number of different ways. In the first place, "efficiency" may not refer to the same qualities in the two types of undertakings. A private undertaking endeavours to maximize its net revenues, but this ambition happens to be one that is strenuously disparaged by local authorities. A local authority is the instrument of social policy, over and above the single-minded standard of exploitation of each undertaking. For example, to promote health, to encourage residence in the outskirts of a city rather than in central districts, to attract factories to absorb the unemployed and so take a load off the Public Assistance expenditure, to reduce general rates, to take but a few outstanding examples, it deviates in the arrangement of its services and charges from the criterion of the private entrepreneur. And each local authority deviates with a difference. A deficit, as we have already suggested as true of water undertakings, then, is not necessarily evidence of inefficiency; a private undertaking if commissioned to carry out the identical task might show a still larger deficit. Alternatively, if the municipal undertaking had been more efficient the deficit might have been less. But in both cases, statistics would be of little value.

A most detailed knowledge of the history and circumstances of the several undertakings is necessary to reveal the relevant forces. Nor is the accountancy record of any single year a helpful indication. Any two units of enterprise, municipal or private, may be affected differently in the same year, especially if geographically diverse: the holiday crowds may be kept away by a wet and cold summer, and the tramway receipts unexpectedly suffer.

Secondly, costs and prices are in monopoly conditions determined by factors other than those of efficiency, and therefore have not the same significance as competitively determined costs and prices. Monopolies, whether public or private, can affect their prices by varying the amounts of the commodity or service they are prepared to offer; the absolute level of prices will depend on the elasticity of demand in various localities and on the rate at which costs change as output is changed. The various localities are markedly diverse, even in the same part of the country, in their composition as "markets"; total wealth is different; the total amount spent on different utilities is different; the uses of the commodities or services are different; the sparseness or density of population varies. A comparison of prices is therefore inadequate as a pointer to comparative efficiency. Similarly with costs; the prestige and the security derived from working for a public authority may enable it to obtain labour at a lower rate than would have to be paid by a private company, but statistics which reveal *absolute* differences in wage-rates are no adequate guide to the comparative efficiency of the two types of organization in the recruitment of labour. This can be revealed only by *relative* differences in wage rates, which statistics cannot measure. The taxing power of local authorities enables them to raise capital at lower rates than those payable by private companies, but the statistics may hide the efficiency of the municipal finance officer in raising capital at a still lower rate than that explicable solely on the ground of greater security.

Indeed, differences in cost must frequently be led back to the provision of capital and to present working charges. To assess these fairly requires a knowledge of the history and topographical situation of each undertaking. Some may have had to raise their capital at a time when money was comparatively dear. Some may have obtained their money cheap but had to spend a great deal of it because iron, or steel, or timber, or machinery happened to be dear at that time. Others again, to buy out an unsatisfactory private undertaking, must bid higher owing to the urgency of the wish to acquire the undertaking. Or it may not be possible to obtain the site which is ideal technically for the purpose without a greater cost in one town than in another. Thus when the Mossley Gas Works were built in 1931 it was necessary to make enormous excavations of clay in order to level the site to rail level, and to take down a brick and stone bridge spanning the main railway line and erect a new concrete bridge 108 ft. long and 6 ft. wide between parapets. Again Salford in 1937 could not find a vacant site for its bus terminus which would conveniently and adequately serve passengers to and from Manchester. The city had to pay £31,500 for a site belonging to the L.M.S. Railway, with old shop property and a hotel—and then pay for demolition! Moreover, as is amply revealed in later chapters topographical variations render especially unjust any attempt to use statistical comparisons of transport and water undertakings.

Now, statistics of surpluses, cost ratios, revenue, rates and charges swallow up all such factors operating in the period to which the figures relate, besides the fact of public or private ownership and administration. The legal framework within which the undertakings operate; the number, location, and density of the local population; the size, nature, and disposition of local industries and the degree of local industrialization; the income structure of the population; the degree of proximity to the source of power, etc., all exert some effect on costs and charges. If the statistics are to be used in the comparison of efficiency, one of three courses must be taken: (i) the other factors must be assumed to operate equally with both types of undertaking and so cancel one another out, or (ii) they must be evaluated by reference to objective standards, or (iii) the conclusions to which the statistics seem to point must be hedged round by a number of qualifications and reservations. An American enquiry studied a sample of public and private undertakings such that the authors could take the easiest course and assume that the various factors cancel out, but besides begging the question the results were tentative and inconclusive.[1] At the end of his attempt to deal with the problem statistically, Professor Knoop writes:[2] "It is impossible to draw any deduction concerning the effects of public and private management."

Therefore, because the independent variables are complex and difficult to evaluate, we take the view that they would be of little value in a study of the comparative efficiency of private and public undertakings, or public undertakings *inter se*. The problem of homogeneous sampling is especially difficult in this case, and even if statistical difficulties could be overcome, the conclusions which they would suggest would be presumptive and inconclusive. To this conclusion one is forced as the result of attempts to make comparisons, and a knowledge of the actual and historical conditions which have combined to give their character to the factors in the efficiency of the various undertakings. Statistics would be of value only if they related to the early history of the undertakings and were sufficiently detailed to focus the attention on one factor so that differences in various indices were significant; but the figures available are not sufficiently detailed.

---

[1] *American Economic Review*: "An Inductive Study of Publicly Owned and Operated versus Publicly Owned but Regulated Public Utilities," 1929 Supplement, p. 197.

[2] *Principles and Methods of Municipal Trading*, p. 358.

Apart from all these considerations, there are the difficulties involved in the meaning of the accounts. As we show in Chapter Six much has been done to introduce a basic uniformity in municipal accounting so that comparability has been more nearly approached than some decades ago, but variations of interpretation still persist, which are enough to give considerable pause to those bent on comparison. What looks like a loss, for example, may not be anything of the kind.[1]

A far more profitable as well as interesting solution, then, is to attempt an analytical study of the various forces at work, some of which have been touched upon above. It is possible to illustrate by statistics some of these factors revealed by analysis, but the function of statistics here is merely verificatory and secondary to the major task of description and analysis. The statistics have sometimes borne out the conclusions in various fields suggested by analysis, and have sometimes seemed to controvert the conclusions, when further enquiry has revealed the operation of factors which would have remained unexamined in a purely statistical study.

This, then, brings us to the place of what follows in this survey. It will be, first, of importance to trace the historical development of municipal enterprise, then it is essential to make a brief survey of the legal framework within which the municipalities are free to manage their undertakings, the emphasis being rather upon the extent to which the local authorities themselves are not entirely free agents in the administration of the factors of supply and demand. After this we enter into a discussion of the gas, electricity, transport, and water undertakings. Then it may be possible to appreciate the general quality of administration, and the main improvements which might be made.

---

[1] Cf. Chapter Six, pp. 101 ff.

Chapter Three

HISTORY AND CONTROVERSIES

MUNICIPAL trading is of considerable antiquity. It is not an extraordinary caprice which began to afflict a part of mankind somewhere towards the end of the 19th century. Indeed, the principle of social control of economic activity has, in the millennial cycles of history; appeared to mankind to be much more natural than its freedom, and the period of *laisser-faire* at the beginning of the 19th century in England is merely a remarkable and very short and a by no means absolute interlude in a long history of state control.

In the mediaeval state it was most difficult to distinguish between the corporation governing the municipality and the craft and merchant guilds which conducted industry. The latter selected the members and officials of the former. The borough was in its origin and prime, in essence, "an association of producers."[1] Where agriculture was predominant, the whole process, the rotation of crops, the use of pastures, and the rest, was under the administration of the borough. There are officials with such names as haymaker, grassman, hogdriver, molecatcher, pigringer, pasture-maker, tender of the Town Wood. On the coast there are herring-packers and fishwashers and harbourmasters. The Berwick-on-Tweed Corporation provided municipal bulls for breeding. Markets, the stands, quantities, qualities, prices, were regulated by municipal ordinance and implemented by municipal inspectors. Such corporations provided cheap wood and coal (the ancient equivalent of gas and electricity) to the town's poor. Three forms of trading stood out conspicuously: water-supply, the conduct of markets, and the management of harbours and docks.

This went on amidst vicissitudes for centuries. By the middle of the 18th century a great blight had fallen upon most of these undertakings, some of which had in their time been remarkable examples of civic efficiency. The services rendered were indifferent, and the cost was high. The Report on Municipal Corporations of 1832, and the researches of the Webbs, demonstrate the chief difficulties, and offer important instruction. The aldermen and councillors were no longer intimately part of the everyday life of the town. Originally, as members of a guild, they were units in a small and very lively community, impressed with a sense of duty to their fellows, commanded and sanctified by the authority of the Church, and at once producers in continual contact with consumers who were in the other guilds and consumers of the product of the latter. There was small possibility for them to become an exclusive body, regarding themselves rather than the whole body of the citizens as "the Corporation."

---

[1] S. and B. Webb: *The Manor and the Borough*, part i, vol. ii, p. 403. Cf. also Maitland, *Township and Borough*; Ballard and Tait, *Select Charters*.

A new stage with fresh vigour began with the passage of what might have been municipal powers to Statutory Authorities for Special Purposes. A general improvement in this direction began in the middle of the 18th century. By 1835 a very large part of the municipal services were in the hands, not of the municipal corporations, but of some three hundred various commissioners and boards, which acquired the name of "Improvement Commissioners." Their quality varied very much from borough to borough, according to the measure of financial power they had acquired by private act and the energy and ability of the commissioners. Their activities comprised cleaning, lighting, paving, washing the streets, sewerage, markets, very occasionally slaughter-houses and water-supply, harbour management in thirty seaports, and in one case the manufacture and sale of gas. Many of the boards included an elective element, but the number was either small compared with the named members, or was restricted to substantial property owners or more heavily rated citizens. In spite of this the Commissioners were, generally speaking, more representative of consumers than the unreformed corporations. We do not pretend that the Improvement Commissioners were models of enterprise, but they were undoubtedly an important transition stage from the inept and corrupt corporations to the municipal authorities which were later to be the undertakers of utility enterprises.

The most conspicuous development of municipal trading by Improvement Commissioners occurred in Manchester. Here the "Police Commissioners," constituted in 1765, fought a Parliamentary battle unsuccessfully in 1809 against the Stone Pipe Company to acquire the municipal water supply.[1] But about two years earlier they had made a notable step forward. In 1805 William Murdoch introduced gas in place of oil and candles for lighting the Philips & Lee cotton mills in Salford, cutting down the annual cost from £2,000 to £600. In 1807 the Police and Improvements Commissioners began to manufacture gas for lighting their office building. This was extended to the street lamps in the most frequented streets; and, in 1817, the supply was made available for public consumption. It should be noted that the Commissioners were not proceeding upon a theory of municipal enterprise, but merely extending their statutory power to light the streets to that of producing the gas. Expansion was rapid, and, of course, attracted the interest of a private company which tried to obtain powers for a competing gas supply. It challenged the monopoly powers of the commissioners, and sought to obtain them instead. The Police Commissioners promoted a bill to legalize their own power and defeat the company. Parliament granted the petition of the commissioners, partly because it was proved that "many of the signatures attached to the petition of the gas company were forged or fictitious."[1] The policy of the Commissioners is summarized in a note in their Minutes of November 5, 1823. It is of very great interest, since it expresses the faith of those who early looked to the development of municipal administration.

---

[1] A Committee of citizens proposed municipal supply, and was supported by crowded town's meetings. The Committee's report said: ". . . it would be contrary to sound policy to entrust the furnishing and control of this important article of

> "During the last seven years the Commissioners of Police, acting on behalf of and for the benefit of the public, have expended upwards of £30,000 in the erection of gas-works, which works they are prepared to extend as rapidly as circumstances will admit of; every inhabitant paying police rates is interested in these works in proportion to the amount of his rate, and when owning or occupying premises of the yearly value of thirty pounds or upwards has the direct control in the appointment of the Committee of Management, in the choice of servants, and in every other matter connected therewith. The injury to the streets and the loss and annoyance to the inhabitants inevitable upon the laying down of gas pipes have already been incurred in the most public and important parts of the town . . . every repetition of the process must produce a recurrence of the attendant evils, and the permanent inconveniences necessarily incident to works of this nature must be ever in proportion to the number of establishments formed . . . that in this great and rapidly increasing town, there exists no permanent fund whatever for its general improvement, and the Public, no less than the Commissioners of Police, have looked forward with great satisfaction to the acquisition of a fund applicable for that purpose; that the existing

food and cleanliness on which the health and comfort of the inhabitants depend, to persons whose sole object will be the promotion of their own private interest, and who are induced to the undertaking from no other motive." Cf. Webb, op. cit., p. 260, footnote 1.

[1] Simon, *A Century of City Government*, p. 359.

> gasworks are productive of a profit, which instead of being applied to the private advantage of individuals is available for general objects and may be directed either to the reduction of the public rates or to purposes of public improvement, according to the varying wants and circumstances of the time as may appear best to the inhabitants at large; that the consumers of gas are unquestionably entitled to an adequate supply of a quality as good as can be manufactured and at rates which, leaving only a fair and reasonable profit on the public capital invested, shall not exceed the prices paid in neighbouring towns; and that these desirable objects are more likely to be obtained by a general establishment conducted under an effective public control than by any private association founded solely for immediate gain."[1]

Here we see very clearly expressed practically all the arguments tending towards municipalization. The manufacturers were not averse to this policy, even though the largest among them made their own gas for their warehouses and offices. They needed an efficient and regular supply of certain basic services for city and factory. Such criticism as there was came from the groups who have constantly been the critics of municipal undertakings, though not necessarily opponents of municipal enterprise—the petty shopkeepers and small masters, then the chief consumers. These used free-trade arguments. They demanded, justifiably, that the Commissioners should be elected on a universal franchise in order to avoid favouritism in supply shown to the big manufacturers. This insinuation is perennial and is heard today in controversies on municipal enterprise. What the free-traders complained of was the possibility that a local monopoly, even when in the hands of a municipal authority, could be administered on a policy of "undue preference" to different classes of consumers. Nor would they accept the policy of aiding the rates from the profits of the gas undertaking. This subject was for years one of fierce controversy in Manchester. Gas profits could be and were used for general town improvements or reduction of rates to the chagrin of the gas consumers. Power was sought in 1823 to use the profits in this way, but Parliament refused.[2] Why should they, in their capacity as consumers of gas, pay an extra rate in aid of local government services wrapped up in the price imposed on them, which meant a reduction of the rates chargeable to the big manufacturers? (The price in Manchester was 14s. per 1,000 cubic feet in 1820; an astoundingly high price compared with prices today, but due not to exploitation but to the technical expenses of production.) The pressure of the small consumers succeeded in obtaining a reduction of the property qualification for voting from £30 to £16. In 1834 the last great attack on the enterprise was defeated.[1]

---

[1] Webb, *Statutory Authorities*, p. 263.

[2] Cf. Redford, *History of Local Government in Manchester*, vol. i, p. 295. It was on this occasion that the Commissioners composed their statement of policy recorded in the Minutes of November 5, 1823. The growth of a policy to supply water by municipal administration and on the basis of local rating and not a price as hitherto fostered the wish for more municipal revenue for "improvements." The Nineteenth Recommendation of the Commissioners on Health of Towns, 1845, proposed water supply on the rates.

By the Improvement Act of 1830 the Improvement Committee obtained first claim to the gas profits.

The Municipal Corporations Act of 1835 doomed the Commissioners to extinction, but it was not until the last quarter of the 19th century that they disappeared altogether. In most cases their functions, including the strictly trading operations, passed over to the cleansed corporations. Thenceforward analogous trading undertakings were regarded as being the not unnatural province of the local authorities. It will have been gathered that how far and how fast and by what routes the local authorities might move depended upon specific grants of power by parliament.[2]

In the next phase, the intervention of parliament became more general. The fuller implications and consequences of the factory era became more obvious and pressing. The experiments which hitherto had been conducted chiefly in the northern industrial cities became ripe for extension to all by general statutes. This did not occur without a very sharp struggle with the leaders of private enterprise, who by the middle of the 19th century had already important vested interests to safeguard, and theories to match. Indeed, as regards gas, up to the middle of the 19th century the technical and administrative and experimentation, the great risks of competition from lamp, oil, and candle-maker rivals and hostile prejudices, had been undertaken by private enterprise.

The first advance was made where public need was most conspicuous, namely water supply. Between 1845 and 1855 over a dozen northern towns obtained private powers to establish water undertakings.

With one or two exceptions the south of England and Wales were some twenty years behind. The great enquiries into the health of towns conducted between 1839 and 1842[1] and the following years did not give rise to a comprehensive public health measure until 1848, but one instalment of the recommendations which emerged from the enquiries was the Water Works Clauses Act of 1847.

---

[1] In 1834 the Commissioners, predominantly Tory, urged that the undertaking be sold to a private concern, or in other words themselves and friends. The proposal was defeated. Redford, op. cit., pp. 343–46. In 1838 the management of the gas undertaking was transferred from the Commissioners to the Manchester Corporation.

[2] Cf. for this and the following, Clifford, *History of Private Bill Legislation*, vol. ii.

Development was based upon the conviction appearing in Edwin Chadwick's *General Report on the Sanitary Condition of the Labouring Population of Great Britain* of 1842 "that the formation of all habits of cleanliness is obstructed by defective supplies of water"; and the recommendations "that the primary and most important measures, and at the same time the most practicable, and within the recognized province of public administration, are drainage, the removal of all refuse of habitations, streets, and roads, and the improvement of the supplies of water. . . . That the expense of public drainage, of supplies of water laid on in houses, and of means of improved cleansing would be a pecuniary gain, by diminishing the existing charges attendant on sickness and premature mortality. . . . "

TABLE SHOWING THE ASSUMPTION OF WATER SUPPLY

To	1840	5	From	1870–80	32	From	1910–20	16
From	1840–50	11		1880–90	28		1920–30	90
	1850–60	27		1890–1900	36	Since	1930	1
	1860–70	26		1900–10	42			

The Report of 1842 found that of fifty large towns, six were satisfactory, in thirteen supplies were fair, in thirty-one definitely bad. The successful administration of a reformed system was, it may be noted, recognized as being "dependent mainly on the securities taken for the application of practical science, skill, and economy, in the direction of local public works." The Report favoured the giving of power to local authorities to acquire existing and future water companies.[2]

The Commissioners on the State of Health of large Towns, 1844–45, continued with even more careful enquiries into the condition of water supply. A central problem was how to save the waste arising from the existence of two water companies, operating in the same area, while safeguarding the consumer from absence of competition. Evidence showed that in many instances companies were shy of extending their works, for want of sufficient security against rivals setting in. On the other hand, there were cases like Liverpool where the two companies came to an understanding, and secured a monopoly, with large dividends. The report on Coventry complained of insufficient supply, in part owing to the mains being too narrow. "Yet here, as in other towns, there is no remedy. The water companies may do as they please; and if the public, by an extraordinary effort, becomes so powerful and energetic as to set up another opposition company, it is soon perceived to disappear; it merges in the old companies, and so far as the public is concerned, it is swamped."[1]

---

[1] Conducted by the Poor Law Commissioners on an address by the House of Lords.

[2] *Report*, pp. 72–80. The Second Report on Large Towns, 1845, Eighteenth Recommendation, is much firmer on acquisition by the local administrative body.

The state of affairs can perhaps be best illustrated by a quotation from a Memorial submitted by the Southwark and Vauxhall Water Companies[2] (the extract also includes some other criticisms applicable to most other areas), which runs as follows:

> "The results of that competition were as inconvenient to the public as they were disastrous to the Companies, and afforded the very strongest illustration of the truth of the doctrine laid down by the Committee of the House of Commons that the principle of competition cannot with advantage be applied to the operations of Water Companies.
>
> As regards the Companies, the result of the struggle was an immense expenditure of capital in utter waste—double and treble sets of mains and pipes being laid down in districts where one set would have better served the inhabitants. An enormous annual outlay, equally in utter waste—in the salaries of canvassers and commission to agents, who procured tenants—in the bills of plumbers who changed the service pipes of the tenants from one set of mains to another—in the charges of taking up and re-laying roads and pavements on the like occasions—in double and treble sets of turncocks and pipe-layers—and, as the climax of absurdity, a payment of all parochial and district rates in every parish on all the pipes of all the companies in proportion to the capital expended on assumed profits or interest which it is needless to say had no existence . . . and the total return on more than half a million of capital expended has not since been, and is not now, more than £2⅜ per cent per annum.
>
> The inconvenience as regards the public was scarcely less striking. The funds which should have been devoted to improving the supply of water were wasted—the districts which, being densely peopled, were supposed likely to yield a return, were encumbered with double or treble sets of pipes and disturbed by the daily breaking up of the streets and roads, consequent on the incessant change of tenants from

---

[1] B.P.P., 1845, vol. xviii, Appendix, part ii, p. 261.

[2] Ibid., vol. xiii, Supplement, pp. 116 and 117.

> one Company's mains to those of another—while other districts less thickly inhabited were left without the supply necessary for domestic convenience, or protection from fire."[1]

A member of the Commission stated:

> "There are many and grave objections to the present mode of supplying water to towns by private companies, such as their being arbitrary, irresponsible, and unaccommodating. They have also a strong interest against all improvements in the quality or the quantity of water, as engendering expenses and diminishing profit: besides it is not a mode available for the inhabitants of rural districts or of small towns. Professor Clark (and other witnesses) have offered their very conclusive evidence against joint-stock companies, as compared to the town-management; and they are equally agreed that no town can be considered as duly supplied unless the service is constant.
>
> In truth, what are commonly taken to be competitions in which the public interests are believed to be gainers, are in reality, and almost without exception, combinations against the public interests. It is thus with the water and the gas companies. The so-called rival companies sooner or later coalesce: they agree upon and determine the rates at which they will allow the public the necessary supplies of water and gas. Every new company that starts is soon found to merge in the old; and thus, in place of one original company or management, we have commingled twenty companies with twenty managements—the public paying the difference."

Witnesses connected with existing water companies generally admitted that no copious supply of pure water to the poor could be secured unless the duty of providing it was placed under the management of a disinterested body. It is not unfair to infer from witnesses' statements that there was considerable under-exploitation of the resource, due to lack of enterprise. Witnesses connected with existing water companies admitted that no sufficient supply could be secured to the poor unless the duty of provision was placed upon some "disinterested" body.[2]

The Metropolitan Water Supply was particularly bad. It was in the hands of private companies, the area of whose operations in some cases overlapped by deliberate Parliamentary intention to secure the benefits of competition. The supplies were badly polluted; four of the principal companies delivered water without any previous filtration. The administration was costly; it was without relationship to drainage and management. The quality of the water caused serious losses: "the saving in soap, from the use of soft water, in the operation of washing . . . would be probably equivalent to the whole of the money expended at present in the water supply; that the saving from the use of soft water may be estimated at about one-third of the tea consumed in the Metropolis; that other ordinary operations would be much facilitated by the use of soft water."[1] A consolidated water supply and drainage administration was estimated to cost from 30 to 50 per cent less than the existing charges for the so terribly deficient a water supply alone. As there was no municipal authority for the whole of London, the Commissioners could only recommend transfer from private companies to a metropolitan public board.

---

[1] On Liverpool, see B.P.P., 1844, vol. xvii, Appendix, pp. 189–93.

[2] 1848, Report, part ii, Appendix, p. 50.

The Waterworks Clauses Act of 1847 contained a system of regulatory clauses dealing with profits, rights of landowners, purity of supply, and so on, and was to be incorporated, unless special reasons could be shown why not, in every private bill empowering companies or persons to supply water. The Public Health Act of 1848 empowered the transfer of privately owned waterworks to town councils. The Acts were amended in 1863, and supplemented by the Public Health Acts of 1875 and 1878, and they are the basis of the water undertakings of both private and municipal enterprise.[2] In 1870 the Gas and Water Facilities Act short-circuited the private bill procedure method, and made the Board of Trade the empowering authority by Provisional Order. Then, as a result of the deliberations of the Royal Sanitary Commission of 1869–70, the Public Health Act of 1875[3] gave general powers to urban authorities to undertake the necessary acts to provide adequate water supply by their own direct construction, or by leasing or hiring or purchasing waterworks, or by contracting with any person for the supply. Where a private firm with statutory powers was able and willing to supply water "proper and sufficient for all reasonable purposes," the local authority was excluded. Here was a recognition of the local monopolistic nature of water undertakings. In spite of the protection given by the clause just mentioned, the new law was an immense stimulus, and rapid expansion followed, as the preceding table (p. 41) shows. At a much later stage in the century local authorities were in many cases impelled to take over water undertakings from companies in spite of the improvement of the law and administration of control over the latter. For example, Tynemouth in 1898 bought out the

---

[1] Report (General Board of Health), Supply of Water in the Metropolis, B.P.P., 1850, xxii (3), p. 321.

[2] Cf. Michael and Wills, *The Law Relating to Water Supply*, edn. 1936.

[3] Replaced, with amendments, by the Public Health Act, 1936.

North Shields Water Company by permission of Parliament. The Company had not vigorously enough prosecuted efforts to obtain a share of water from the head of the Tyne against the action of the Newcastle and Gateshead Water Company; it did not obtain adequate supplies for the city, and even the insufficient supply was obtained only as the result of continual public pressure. Only after the expenditure of considerable sums were adequate supplies provided by the Corporation, whose schemes were laid for many years ahead. Here was, as in so many cases, a collision between municipal public spirit and care for public interests, and a commercial shareholder's outlook.

For gas supply also, the process of granting powers on the basis of the sporadic special efforts of local authorities was gradually superseded by general enabling legislation. Once more the pioneer work among municipalities was done in the North of England, for example Keighley (1824), Beverley, Yorks (1825), Salford (1831), Stockport (1838). In 1847 Parliament passed the Gas Works Clauses Act "consolidating in one Act certain provisions usually contained in Acts authorizing the making of gas works to supply towns with gas." This did not avoid the need for procedure by private bill, but it made the progress easier because the Act virtually indicated to local authorities (as well as private companies) what was the settled policy of Parliament in the matter.

The northern towns were near the coal-fields, a very important consideration in the early history of railway transport. In the south, the private companies had already, especially in the Metropolitan area, obtained a grip on supply. London itself was torn apart by thirteen competing gas companies. What may happen to consumers when there is no regulation of competition within a unified area is told in the history of those thirteen rivals and the enquiries leading up to the Metropolitan Gas Act of 1860, which imposed maximum prices, and gave each of the companies the monopoly in its own district.[1] To give one instance only of want of co-ordination: a rival company would invade the district of another, no notice would be given to the consumers, stronger illuminating power might be supplied, and this would ruin the burners. As regards public control, the following extract from the colloquy between the Commissioners and a witness clearly reveals a grave problem. "We have heard of inspectors of the quality of gas; do you think that it would be advantageous to have some person appointed as inspector of meters?—

---

[1] 23 & 24 Vict. c. 125.

I am certain that it would; he should be appointed by the vestries, or appointed by someone independent of the companies; it is very necessary.—Will you state your reason for thinking so?—It is a question of measure. If a person buys an article by weight or measure, and he is convinced that he has not had what he has paid for it, it certainly seems right that he should have some power of controlling it, or of arriving at a right conclusion."[1] But as in the case of the undertakings operating under the Gas Works Clauses Act of 1847, insufficient provision was made for protection of the consumers (of course, no special protection was required in the case of the municipalities, for they were the elected representatives of the consumers) and the consequence was periodical popular outcries protesting against the prices charged.

TABLE SHOWING ASSUMPTION OF GAS SUPPLY*

ENGLAND AND WALES

Up to	1840	4	From	1881–90	24
From	1841–50	5		1891–1900	50
	1851–60	18		1901–10	25
	1861–70	22		1911–20	16
	1871–80†	76		1921–30	18

* *Precedents Private Bill Legislation Affecting Gas and Water Undertakings*, compiled by George Wilson Stevenson, C.E., F.G.S., London, 1879.

Michael and Will, *Law Relating to Gas and Water*, 1924, vol. i, Schedules A and B, pp. 73–94.

Returns relating to all Authorized Gas Undertakings in England and Wales, belonging to Local Authorities: 1882, 1892, 1901, 1910, 1920, 1925, 1930, 1935, 1937.

† During the years 1877–78, no less than twenty-eight local authorities acquired gas undertakings.

TABLE FOR NORTHERN TOWNS

Up to	1840	4	From	1881–90	9
From	1841–50	4		1891–1900	19
	1851–60	11		1901–10	12
	1861–70	15		1911–20	3
	1871–80	33		1921–30	4

TABLE FOR MIDLANDS

From	1850–60	6	From	1891–1900	7
	1861–70	3		1901–10	5
	1871–80	24		1911–20	5
	1881–90	8		1921–30	4

Up to 1850 competition was "believed to be the life of the day."[2]

---

[1] Select Committee on Gas (Metropolis), 1859, 2, 139–41.

[2] Municipal and Private Operation of Public Utilities, Report to the National Civic Federation Commission on Public Ownership and Operation, 1907, part ii, vol. ii, United Kingdom, p. 125.

Parliament did not look to territorial monopolies. Competition was encouraged as the natural check upon arbitrariness by Gas Companies, and as the natural protection of the consumer. The business was regarded as speculative; and the unreformed or recently reformed municipal corporations seemed hardly the ideal agencies for conducting such undertakings. New gas companies were therefore warmly welcomed. The actual results, however, did not justify the high hopes entertained by people or Parliament. Owing to amalgamation, competition practically ceased in the provinces, by 1850, and in London by 1860.

The record of competition among gas companies is the same whether it took place in Glasgow, London, Sheffield, or elsewhere. The evils are not different; the only means of distinguishing one experience from the other is by the name of the town. There is a monotonous repetition of dissatisfaction with the high charges and bad service of the existing company. The high dividends paid by the company, and the universal complaints, attracting a new gas company; the old one immediately dropped its charges, as in the case of Sheffield, from 12s. to 8s. The new company followed suit; an agreement was reached between the two companies; but neither trusted the other, and cut-throat competition ensued, and prices further dropped from 8s. to 4s. 2d., as in Sheffield. Amalgamation was then effected; and the newly established company again rode the high horse, till the threat or the actual establishment of a new company compelled it to reduce its prices. The legal costs of action of the amalgamated gas company against the new company in Sheffield as to the right to lay mains in the same streets amounted to some £15,000.

The limitation of dividends by Parliament was not always effective. In 1825 Glasgow's gas company was forbidden to pay dividends exceeding 10 per cent. Nevertheless, it was generally suspected that the company did not obey this restriction, and consumers' dissatisfaction was widespread. A new company was formed in 1843. The duplication of plant and personnel, the laying of pipes and mains in the same street, and the tearing up of streets, coupled with the wastage of gas by leakage (usually doubled in the case of two companies) naturally led to high prices. Yet the committee which investigated Glasgow's complaints in 1859, and estimated the wastage of gas by one of the companies at 23 per cent, suggested as a remedy the introduction of a third company! Parliament, which by now had learned from experience, intervened, and when the Town Council applied to set up a new company, permission was refused, and they were advised to come to terms with the gas companies and buy them out. This was done in 1869.

It is interesting to note that when districting took place in London (i.e. the companies came to an agreement in 1851 and 1860, each to have its own area and not trespass) there was an outcry against high charges, and at being left at the mercy of a monopoly. On the other hand, in Glasgow where no districting took place, there was an outcry against the high cost and nuisance of breaking up streets occasioned by duplication.

The evils of competition formed the subject of part of the Report of the Surveying Officers to the Commissioners of Woods and Forests, who stated:

> ". . . Whenever a sharp contest between rival gas companies has for a time existed, the breaking up of pavements by the laying down of the principal aims is the least evil; the most serious one is the continued changing backward and forward of the service pipes from one set of mains to that of a rival company: every such opening of the ground rendering it unsafe for weeks, and sometimes months, to the passage of carriages and horses. The ground so loosened admits of any gas escaping from fractured mains more directly to the cellars and kitchens of the houses adjacent.
>
> That a continuous and excessive escape of gas is going on in those streets where numerous gas-pipes are laid is evident to anyone looking at the colour and state of the earth surrounding such pipes as are constantly to be seen in the streets of London.
>
> We need not refer more particularly to the evils of competition in price, or their usual ending in the amalgamation of the rival companies."[1]

In 1859 a Petition was presented to the House of Commons by various gas consumers in London. When this was discussed in the House, the sentiments of one member ran as follows:

> "Not one of those memorialists had the courage, or he might say the audacity to ask the House to interfere with the rate of dividend permitted by the existing acts of those companies."[2]

When the Select Committee of the House dealt with the Gas Bill of 1860, its chairman intimated to the gas companies that it was proposed to make provision in the Bill for the appointment of inspectors with wide powers. There was an outcry in the Commons that the effect of such a provision would shift responsibility from Board of Directors to the Inspectors, who had no interest whatever in the prosperity of the companies. In the House of Lords (the consumers' champion), one of the members alleged that great pressure was exercised by the thirteen gas companies, who, upon learning the intentions of the Select Committee, immediately sent out circulars to all gas companies in the provinces calling on them to instruct their members to oppose the Bill in every possible way because if it were to pass into law, it would indirectly affect all gas companies outside the Metropolis. The House of Lords also expressed its feelings against the methods employed by the gas companies in raising their capital.[1] It was pointed out that it was against the interests of the public to raise new capital by share issue and not by loan, a common difference being 4½ per cent on loans and 10 per cent dividends.

---

[1] B.P.P., 1847, xx, 124–13; iii, p. 33. Southampton Consumers' Gas Light and Coke Company; see vol. xii, 124–84.

[2] Hansard, 1860, clix, p. 1679.

In 1875 when Birmingham bought out the private companies and supplied gas itself a great saving was effected. In 1882, during an enquiry held on the Consolidated Bill of Birmingham, it was conclusively shown that during the seven years when Birmingham supplied its own gas, not only did a reduction of 9d. in the cost of gas take place, but that it was found possible after allowing for considerable reserves, to set aside a sum of £182,500 for the borough improvement fund, and that this meant a reduction on the rates of 4·30d. Although part of this profit was due to prosperity, it was admitted even by opponents of the Bill that the economies effected were due to cheaper rate of interest obtained by the Corporation, the difference representing some 3 per cent.

In 1870 the Gas and Water Facilities Act introduced Provisional Order procedure, and in the Public Health Act of 1875 a general enabling power was established in these terms: "Where there is not any company or person (other than the urban authority) authorized by or in pursuance of any Act of Parliament or order confirmed by Parliament, to supply gas for public and private purposes, supplying gas to any part of the district of such authority, such authority may themselves undertake the supply of gas for such purposes or any of them throughout the whole or any part of their district; and if there is any such company or person so supplying gas, but the limits of such company or person include part only of the district, then the urban authority may themselves undertake to supply gas throughout any part of the district not included within such limits of supply." Further, if gas were not already used for street lighting, it might be supplied by the municipality. Provisional Order procedure now implemented by the newly formed Local Government Board (1871) attracted the municipal authorities; the policy of the central authority was encouraging; the profitable nature of the enterprise was shown most clearly of all in Manchester's undertaking and substantially enough elsewhere.

---

[1] Hansard, 1876, vol. 230, pp. 227–31.

It should be noticed that Parliament had not given nor has it since conferred, the right to buy out *compulsorily* water and gas undertakings. Power of compulsory purchase was given later, and only for tramways and electricity.

So far the industrial needs of the northern manufacturers, some civic pride and obligation, and a temptation to command a possible profit-making concern which would aid the rates had coalesced. It was believed that monopoly was desirable, and that the consumers would find their surest protection from exploitation under municipal control.

The motives were eloquently expressed by Mr. Joseph Chamberlain in his speech to the Birmingham City Council in favour of the requisition of the gas undertaking.[1]

> "He asked the Council to consider two principles on which he thought their decision should be based. In the first place, he held distinctly that all monopolies which are sustained in any way by the State ought to be in the hands of the representatives of the people, by whom they should be administered, and to whom their profits should go. In the second place, he was inclined to increase the duties and responsibilities of the local authority, in whom he had so great a confidence, and would do everything in his power to constitute these local authorities real local parliaments, supreme in their special jurisdiction. He then dwelt on another consideration which should influence the action of the Council—viz., their inadequate means for the responsible work imposed upon them. If they desired to recompense the faithful services of an officer, or if they proposed to increase their duties and responsibilities they were met with opposition from ratepayers unwilling to do justice because their means were insufficient; and he pointed to the work then pressing on the attention of the Council, the state of streets, the disposal of the sewage, and the call to take advantage of the Sanitary Act. On these points, he said that, with regard to the streets, on a previous occasion no less a sum than £30,000 had been struck off the estimate of the Public Works Committee; that under the pressure of lawsuits and injunctions it was absolutely necessary to deal with the sewage nuisance, but that the cost was overwhelming and alarming; and that with regard to the health of the town the Council would be involved in the future in a still larger expenditure than that already undertaken, Birmingham having fallen from its high position, and, no longer the healthiest town in the kingdom, had become one of the most unhealthy of the large cities and boroughs. He said that under

---

[1] Bunce, *History of the Corporation of Birmingham*, vol. ii, pp. 347–48.

> these duties he believed that the pressure of the rates would become intolerable unless some compensation could be found in such a proposal as that now before the Council, and he pointed out that while this compensation was secured to other large cities and towns by landed property, dock dues, or profits from gas undertakings, Birmingham was limited to direct taxation."

The next advance in municipal enterprise occurred in transport. Between 1860 and 1870 several private companies promoted by an American, Mr. G. F. Train, had established tramway systems,[1] and Liverpool had even provided for a possible future purchase of those in its area by its Tramway Act of 1868. Parliament, still shocked by the rapacious history of water supply and gas monopolies, intervened at an early stage.[2] It was seen that two things were necessary: private interests should not be allowed to entrench themselves too strongly, and the user of the streets must be safeguarded. Local authorities felt that profits from tramway undertakings ought to

THE DEVELOPMENT OF MUNICIPAL GAS SERVICES

LOCAL AUTHORITIES—GREAT BRITAIN

Year	Sales of gas		Number of consumers	
	Million cub. ft.	As percentage of all undertakers	Thousands	As percentage of all undertakers
1885	25,202	33	980	47
1900	52,731	38	1,767	48
1905	60,559	37	2,251	44
1910	67,492	37	2,666	42
1913	76,299	37	2,888	41
1924	92,297	36	3,182	40
1929	104,338	36	3,563	39
1930	103,818	36	3,629	39
1931	102,699	35	3,682	38
1932	101,576	35	3,738	38
1933	101,722	36	3,808	38
1934	103,762	36	3,877	38
1935	105,642	36	3,938	37
1936	110,557	36	3,997	37
1937	113,355	36	4,062	37
1938	112,781	36	4,093	36

SOURCE: Board of Trade Returns relating to Gas Undertakings.

---

[1] Cf. *Municipal and Private Operation of Public Utilities*, part ii, vol. ii, pp. 402 ff. National Civic Federation Report, New York.

[2] Clifford, op. cit., vol. i, p. 189.

accrue to the aid of rates rather than to private individuals. (This was an era of rapidly increasing local government expenditure—on health, education, roads, police-forces, etc.) They urged, therefore, that if a local authority did not wish to run a tramway service it might lease the track to a private concern. The compromise between private initiative and public control adopted by Parliament was peculiar. The local authorities were not authorized to place or run carriages on the tramways, or to take tolls or charges. But private companies could commence an undertaking without the sanction of the local authority, or (if not identical) of the road authority concerned. Should a local authority wish to construct its own track (similarly private firms having received consent as above) it had to apply to the Board of Trade for a Provisional Order. Local authorities were given the power to make by-laws regulating the speed, the number and the frequency of the tramcars running in their district, even where the trams were privately owned. Most important of all, they were empowered to purchase private undertakings in their area after a period of twenty-one years of operation at a price "exclusive of any allowance for past or future profits of the company." Finally, provision was made for the insertion in each Provisional Order of maximum charges and safety regulations.

If Parliament was wise to intervene in the case of tramways, its judgment of what to do was not so wise. It was difficult to discover from this compromise whether Parliament intended to encourage municipal or private tramways. The situation was satisfactory to neither, for a twenty-one years' term was not long enough to stimulate a sense of continuous enterprise in private firms, while local authorities had, in effect, been warned off the direct administration. Consequently the development of tramways was seriously hampered, and until 1882 such local authorities as built or acquired tramway tracks leased them to private companies. What might happen under this system was well exemplified in Leicester. A company was established in 1892 on the conditions, among others, that one-half of the profits above 12½ per cent (!) was to go to the corporation. The tramway company never made over 12½ per cent.

In 1882 a decisive turn in favour of municipal management occurred. Huddersfield Corporation could find no one willing to operate the track it had built. This induced Parliament to change its policy, and to permit corporations to work the system themselves unless a "reasonable offer" was put in by a company. Not much immediate expansion took place. Between 1892 and 1896 Parliament received a large number of applications for municipal management of the tramways; the Huddersfield arrangement was withdrawn, and local authorities took increasing command of the undertakings. All this coincided and was partly caused by the growth of what may be called socialist thinking. It was the heyday of Fabian Socialism. Blackpool, Newcastle-on-Tyne, Newport, Plymouth, Glasgow, Leeds, followed each other in rapid succession, and in 1896 the stamp of final victory was affixed with the assumption of tramway powers of the London County Council.

The policy of Parliament on tramways in 1870 is open to the grave suspicion that while any profits were probable it preferred them to go to private enterprise; for it was only when a private firm had investigated the situation and concluded that profits were inadequate that the municipalities were allowed to enter. A number of local authorities were therefore compelled by public opinion founded on necessity to undertake tramway transport, even though their area were small in terms of tram-mileage and sparse in population, and even though this required a subsidy from the rates.

TRAMWAYS, LIGHT RAILWAYS, AND TROLLEY SYSTEMS*

Year ended June 30th	Number of undertakings			Local authorities	
	Total	Companies	Local authorities	Capital	Length of line† worked by L.A.'s
				£	
1876	30	26	4	51,271	6
1880	80	65	15	492,548	39
1885	132	108	24	1,406,506	154
1890	131	105	26	1,530,694	206
1895	124	91	33	1,928,722	264
1900	142	82	40	7,011,609	498
1905	276	115	161	27,724,841	1,196
(March 31st)					
1910	254	92	162	42,142,222	1,483
1920	234	76	158	51,296,952	1,511

* Adapted from Royal Commission on Local Government, Evidence II, p. 400.

† In addition some were worked by Joint Boards or Joint Committees of Local Authorities.

Electricity has the shortest history among municipal undertakings, because the inventions making any undertakings possible at all had no commercial potentialities until the 'eighties of last century. It must be regarded, therefore, as laudable that the House of Commons established a Select Committee in 1878 to learn from scientists and electricians like Tyndall, Siemens, Kelvin, and others, what the potentialities were. The Committee[1] was of the opinion that legisation was not yet necessary, at least in a general form, and left the way open to progress by private acts. But it reported in favour of throwing open the field to municipal enterprise; and where private firms entered, recommended that they should be subject to being bought out by the local authorities after twenty-one years. These recommendations were not enacted until 1882. In the meantime, seven municipalities, chief among them Liverpool and Hull, obtained powers to supply electricity. But the extraordinary provision was included in all the cases excepting Hull, that the powers were available for five years only.

THE DEVELOPMENT OF MUNICIPAL TRAMWAY SERVICES

LOCAL AUTHORITIES—GREAT BRITAIN

Year*	Car miles run		Passengers carried	
	Thousands of miles	As percentage of all undertakers	Millions	As percentage of all undertakers
1885	33,000†	65†	253†	70†
1900	73,000†	65†	783†	70†
1905	151,341	65	1,499	70
1910	216,413	73	2,181	78
1913	255,810	75	2,634	80
1924	313,137	83	3,976	86
1929	338,477	86	4,094	89
1930	330,339	86	3,892	88
1931	312,576	86	3,660	89
1932	304,721	88	3,447	90
1933	218,609	91	2,578	93
1934	210,475	92	2,479	93
1935	201,889	92	2,378	93
1936	196,918	93	2,319	94
1937	190,205	94	2,247	95

* For Local Authorities the financial year ends in March of the following calendar year.

† The figures for 1885 and 1900 are estimates, computed by applying the 1905 percentages to the known figures for *all* undertakers in those years.

SOURCE: Returns relating to Tramways and Light Railways.

---

[1] Report from the Select Committee on Lighting by Electricity. B.P.P., 1878–79, vol xi, 224.

THE DEVELOPMENT OF MUNICIPAL TROLLEY-BUS SERVICES

LOCAL AUTHORITIES—GREAT BRITAIN

Year	Miles run		Passengers carried	
	Thousands of miles	As percentage of all undertakers	Millions	As percentage of all undertakers
1913–14	40	100	153	100
1924–25	2,557	96	23,268	96
1929–30	10,822	79	108,163	85
1930–31	12,881	80	127,814	84
1931–32	15,020	76	145,131	79
1932–33	17,193	71	160,976	73
1933–34	19,003	77	188,063	83
1934–35	24,521	77	255,087	82
1935–36	30,606	81	319,792	85
1936–37	35,035	83	368,034	86
1937–38	39,881	84	432,973	87

SOURCE: Returns relating to Tramways and Light Railways.

THE DEVELOPMENT OF MUNICIPAL OMNIBUS SERVICES

LOCAL AUTHORITIES—ENGLAND AND WALES*

Year	Number	Route Miles	Passengers. Million
1919–20	20	30	Not available
1923–24	59	972	122
1925–26	74	1,256	220
1927–28	74	2,341	359

* Municipal Year Book: approximate.

LOCAL AUTHORITIES—GREAT BRITAIN

Year	Miles run		Passengers carried	
	Thousands of miles	As percentage of all undertakers	Millions	As percentage o all undertakers
1931	158,443	12	1,101	21
1932	173,484	13	1,199	22
1933	179,844	14	1,266	23
1934	196,540	15	1,414	25
1935	218,115	16	1,604	27
1936	239,442	17	1,797	28

SOURCE: Garcke, *Motor Transport Year Book*, 1938.

In 1882 the Electric Lighting Act was passed. Although there were already about eighty private companies empowered by Private Acts, their hold upon the industry, either individually or in the range over the country, was too weak for them to frustrate municipalization. There were petitions against the Bill,[1] but they were easily defeated. The policy embodied in the statute was clearly the desire to avoid private monopolies. Therefore the Board of Trade was empowered to grant licences, renewable septennially, to both public or private bodies. An alternative to this procedure was the Provisional Order method, conducted by the Board of Trade and confirmable by Parliament. A prerequisite for private firms to establish a supply by licence was the approval of the relevant local authority. An appeal to the Board of Trade was possible against "unreasonable" refusal, when the Board of Trade could empower the firm to proceed by Provisional Order. Local authorities had the right of compulsory purchase of the undertaking at the end of twenty-one years, after parliamentary confirmation of the order, with recurring rights of purchase every seven years, on the basis of the value of land and equipment as at the moment of purchase, no regard being paid to the profits being earned by the company.

Both the Committee of Enquiry of 1878 and Parliament regarded electricity as especially suited to municipal management. This was partly due to the already long experience, particularly severe in the 'sixties and 'seventies, of private gas monopolies, and to the technical views that electric lighting was only in an experimental stage and that private commerce was not likely to undertake development. As usual the local authorities seem to have been driven by mixed motives: the desire to control a monopoly, the wish to obtain a profitable enterprise, and, it must be emphasized, anxiety for their investments in gas undertakings threatened by this new source of light. Some local authorities who did not themselves own a gas undertaking assumed electricity powers, among other reasons, in order to beat down the company's price of gas.

As we have shown by the survey of expenditure in Chapter One, early electrical development was very slow. At a distance of a dozen years from the passage of the Bill, it will be remembered that the total expenditure of all local authorities was only £100,000. Some local authorities took powers rather as a precaution against experience like that of Glasgow's, where they had been forced to pay through the nose for transfer of the gas undertaking to them, rather than as an earnest of business initiative. Even until a comparatively recent date this protectiveness over the capital sunk in the old monopoly has acted as a brake on development, not only of the municipal electrical undertaking, but also through various municipal competitive methods, on private undertakings in the area. In sixty-six boroughs over four years elapsed between the receipt of powers and the commencement of supply. In other cases the lapse of time was longer, reaching a maximum in Greenock where it was sixteen years. If such a policy is dubious, it is at any rate unfair to blame local authorities for timidity where the technical possibilities were still unplumbed. Any losses would fall on the rates, and fear of this is a severe restraint on the taking of risks. An impetus was given to the establishment of exclusive rights within the administrative boundaries of municipalities. But it was not, and could not yet be, seen that more than lighting was involved, and that apparatus would be devised which would make the *smaller* municipal areas relatively inefficient in generating and distributing power.

---

[1] Cf., especially for the opposition case, evidence of Sir F. Bromwell, Select Committee Electric Lighting Bill, B.P.P., 1882, vol. x, 227, pp. 147–70.

It was not wise of Parliament in these circumstances to put private enterprise under such disabilities as the twenty-one-year purchase period and the recurrence of rights to purchase every seven years. This fault was mended by the Electric Lighting Act of 1888, which extended the periods to forty-two years and ten years respectively. This Act also tended to fortify the monopoly of the local authorities, because private entrepreneurs were now compelled to obtain the consent of a local authority on application for a Provisional Order. This had previously been necessary only in the procedure by licence, and this itself became obsolete. By 1900 some 354 Provisional Orders were held by local authorities. Practically all the larger towns, especially in the industrial areas, ran their electricity undertakings. There were also 164 Orders held by companies. In short, the fundamental distribution and organization of the electricity system of the country had been established. This evolution is observable in the figures of development as we have stated them in Chapter One.

Then occurred certain technical developments which made the use of electricity for power possible, and made possible also large-scale generation at high voltages with distribution over extensive areas. At the same time, costs were reduced, and the public came to look upon electric power as the competitor of gas. It was at this point that the localization of gas industry within municipal boundaries received its first heavy technical criticism, and Parliament began to look for alternatives to or supplements of municipal administration. This phase of the question is taken up later in Chapter Fourteen.

THEORIES AND CONTROVERSIES

We cannot leave the history of municipal enterprise without some consideration of the controversies in its course. The Fabian Socialists deliberately sought socialism by gradual municipalization.[1] Fear of this outcome, as well as a contraction of the scope for foreign investment, caused private interests to organize a widespread opposition. It would be difficult at this time of day to recreate the bitter atmosphere in which the Liberty and Property Defence League fulminated.[2] The spate of local bills and provisional orders caused Parliament to set up a Joint Select Committee on Municipal Trading. It sat from

THE DEVELOPMENT OF MUNICIPAL ELECTRICITY SERVICES

LOCAL AUTHORITIES—GREAT BRITAIN

Year	Sales of electricity		Number of consumers	
	Millions of units	As percentage of all undertakers	Thousands	As percentage of all undertakers
1900–1	68	54	Not available	
1905–6	311	69		
1910–11	639	62		
1913–14	897	68		
1924–25	3,268	64		
1929–30	5,437	69	2,513	72
1930–31	5,594	62	2,908	72
1931–32	5,964	63	3,355	72
1932–33	6,509	64	3,851	72
1933–34	7,373	64	4,368	71
1934–35	8,305	64	4,858	70
1935–36	9,647	64	5,348	69
1936–37	11,003	64	5,877	69
1937–38	12,121	63	6,345	68

SOURCE: From 1929–30 onwards, Annual Reports of the Electricity Commissioners. Before that date, Estimates from Garcke's *Manual of Electricity Undertakings*, 1938.

---

[1] Cf. Sidney Webb, *The Course of Municipal Socialism in the United Kingdom*, *Labour Annual*, 1894.

[2] Cf. Annual Report, 1892–93, for example, p. 18: "Among the many openings for municipal action of which local bodies, in their mania for trying their hands at everything, and taking advantage, is that offered by trade. . . . All reasoning and all facts, as far as at present procurable, show that municipal management is by comparison costly, inefficient, and more or less corrupt."

May 18th to July 27, 1900.[1] It came to no conclusions, excepting that the matter should be further considered at a later date. When in 1903[2] the subject was again considered, attention was concentrated on the problem of the accounts of municipal undertakings.

The reputable arguments urged against municipal trading were summarized before the Committee of 1900 by Lord Avebury in the following terms:

> "In the first place, the enormous increase in debt that they will involve; secondly, the checking of industrial progress; thirdly, the great demand on the time of municipal councillors, which would, in the first place, preclude the devotion of sufficient consideration to the principal municipal problems, which are of a great complexity and difficulty, and in the second place would prevent men who have businesses and professions of their own from entering a municipal life; and fourthly, the undesirability of involving governments and municipalities more than can be avoided in labour questions; fifthly, that the interference with natural laws, in some important cases, has a tendency to defeat the very object which is aimed at; and then, lastly, the risk, I would almost say the certainty of ultimate loss."[3]

Further opposition was expressed in evidence. (1) There was an attack on the "fair wages" conditions which now appeared in municipal contracts, due to the growing influence of Trade Unions. (2) The use of direct labour was deprecated, on the grounds that it strengthened the Trade Unions and made more possible the enforcement of "what they call the Trade Union rate of Wages." (3) Another line of opposition was that municipal undertakings could be utilized to bring about an "unfair" redistribution of income, for example, through a differential price policy in which the poor would pay less than the rich for the same service, like the workmen's fares on the tramways as enjoined by law.

There followed a number of specialized attacks on particular services. (4) The protection of gas undertakings against the competition of electricity was alleged. (5) Instances were quoted of tramway companies who manufactured their own electricity being prohibited from selling it by local authorities, who at the same time refused to buy it in bulk, which would have cheapened the supply. (6) Local authorities were accused of slackness in changing over from horse-traction to electric traction. (7) Opposition was voiced against municipal wiring of houses for electricity and supply of gas-stoves and other fittings.

---

[1] B.P.P., 1900, vol. vii.

[2] Select Committee on Municipal Trading, B.P.P., vol. vii, 1903.

[3] Pp. 122–31.

An excellent defence was made by the then town clerk of Leeds.[1] He argued that water, gas, and electricity have "a definite and physical connection with the place, by reason of the distribution having to be by means of mains through the borough; of course, as regards tramways they are laid in the streets of the borough." It was found difficult for the Corporation to enforce a tramway company's statutory duty to repair the road "between the rails and eighteen inches on either side," with the result that the road surface often became intolerably bad, and this was, of course, paid for by the borough. St. Helens had bought out its tramway system in order to keep its roads in good repair. In the cases of gas, water, and electricity a single producer monopolizing all the supply can serve the consumer more cheaply than alternative methods, because the more consumers there were per mile of main, the cheaper the work could be done. He thought that local authorities of all sizes could be trusted to behave reasonably; and where this expectation broke down "there is always the departmental and parliamentary check." The supply of electric and gas fittings was a necessary step in promoting sales. He gives an example of a development of the Leeds tramways, showing that fares had been reduced from 33·3 per cent to 50 per cent of the fares originally charged, while at the same time employees were better off in wages and hours. The Lord Provost of Glasgow,[2] representing perhaps the most pre-eminent example of municipal enterprise, showed that the services had been cheapened, and threw light on the fact that municipal enterprise had spread so rapidly in the north, not on collectivist principles, but as a sheer business proposition for the obtaining of cheap power, water, and transport. The argument that municipal employees could swing elections was disposed of by the assertion that only 6,500 employees had votes out of an electorate which totalled 132,000. He stressed the view that local authorities were able to obtain loans cheaper than private companies could, on account of their credit.

The Times[3] published a series of bitter articles charging local authorities with extravagance and incompetence, faulty accountancy, potential amenability to corrupt electoral pressure by employees. In a series of pamphlets,[4] the Socialists denied the various charges of ineptitude and carried the war into their opponents' camp. They pointed out examples of corruption, inefficiency, overcharging, and sweating in private enterprise. As in Philip Snowden's vigorous pamphlet of 1905,[1] there is an attack on the alleged fears of those who see ruin in the rising local debt: "The railway companies of Great Britain have borrowed £1,200,000,000 from individuals they call shareholders . . . but who would call this a debt, or think of giving vent to dismal howls at the impending bankruptcy of the railways because its borrowed capital is large and increasing? Municipal capital is no more debt than the capital of any limited company." In another pamphlet[2] figures are quoted to show that the real capital assets of a corporation as often as not exceed its debt. It is urged that local authorities can attract the best managerial brains at relatively low salaries because of the relative security of the public service[3]. As to the argument that municipal employees might be egoistic in their exploitation of a municipal monopoly, it is admitted that that may one day come about, but, it is urged, at the present time those who work hardest for the poorest pay on the basic services have practically no voice in settling the conditions under which the work will be done, and this is regarded as a social evil which ought to be remedied.[4]

---

[1] Pp. 235 ff. [2] Pp. 215 ff. [3] August 19–November 11, 1902.

[4] E.g. Suthers, *Mind your own Business*, 1905; Shaw, *Common Sense of Municipal Trading*, London, 1904.

The Select Committee of 1903 confined itself almost entirely to the problem of securing that the actual state of affairs should be fully and accurately revealed in the accounts. We shall have occasion to review its conclusions when we deal with the actual operation of the undertakings. One other item of fierce contention was examined by the Committee, the business world's demand that the accounts of municipal undertakings be subject to rigorous audit, and whether this should be carried out by professional or by central government auditors. How far audit now proceeds will be discussed in a later chapter.

Public discussion declined in ferocity. Meanwhile the development of trading proceeded, with a steady rise of expenditure and service. There were certain technical inventions in the course of development in electricity, gas, and transport destined to change the nature of the controversies we have briefly reviewed. In the field of electricity, heating and power became more important than lighting. In gas supply the advent of competition from electricity caused a revolution in the salesman's outlook, disturbed the settled monopoly, and compelled municipalities, as well as private companies, to undertake remarkable projects of research in their own laboratories into the industrial uses of gas and the possibilities of a widespread extension in the area of supply pumped through many miles of mains by newly devised machines. Perhaps most revolutionary was the advent just before World War I of the electric trolley-bus and the petrol-driven motor-bus. Indeed, after the pace had been forced by the exigencies of the War, the tramways, which had had a quarter of a century's development, began to look obsolete. The advent of local and long-distance motor transport necessitated the establishment in 1930 of the Traffic Commissioners to co-ordinate the various forms of transport, their quantity, kind and charges, from the standpoint of an economy wider than that of any municipality. To these considerations we revert in some detail in the discussions of the contemporary administration of the undertakings.

---

[1] *A Straight Talk to the Ratepayers*, I.L.P.

[2] Suthers, p. 71.

[3] *Fabian Tract*, No. 138, 1903.

[4] *Tract*, p. 11.

After the War, the growth of the Labour vote shifted the collectivist trend from the field of local utilities to that of national administration. Changes in the technical bases of industry, and in ideas regarding the control of production and the distribution of income, led after World War I to the conception of "planned economy." This, in Labour as in non-Labour circles, put the national interest above municipal prejudices.

Yet municipal enterprise is still the subject of demands for expansion and extension to new fields. Again and again,[1] the Labour Party sponsored Local Authorities' Enabling Bills. The object of the Bill of 1921 was specially wide: to generalize the power of local authorities to undertake activities having for their purpose "the acquisition of gain, or the promotion of commerce, art, science, recreation, charity, or any other object which might lawfully be established or carried on by a company, limited or unlimited, or association duly incorporated and duly acting under the provisions of the Companies Consolidation Act of 1908." The Bill further sought to facilitate co-operation of local authorities for the joint working of services, the only condition being a sanction by Provisional Order granted by the Board of Trade. The purpose of these Bills was to overcome the difficulties and expense of procedure by Private Bill, or by Provisional Orders for each individual demand by each individual local authority for powers to establish a municipal undertaking.

It is very instructive to observe the evolution of the main terms of these Bills. Up to and including that of 1930,[2] local authorities were permitted to "any business or undertaking within their area. . . ." The power was, however, limited to authorities (counties, boroughs, and urban districts) with over 20,000 population; except that smaller authorities might receive a sanction for an undertaking from the Board of Trade, under conditions prescribed by it. A special meeting, duly advertised as under Section 4 of the Borough Funds Act, 1872, was to be held to adopt the power, but no specification as to a special majority was included. Where borrowing was in any way necessary for the purpose in view (and it would be in almost every conceivable case) the local authority was obliged to get the sanction of the Board of Trade, which would operate under the Public Health Act, 1875, as to terms of repayment. There was a further limitation to the effect that where the total debt of a local authority exceeded one-quarter of the annual rateable value of the authority, the amount could not be borrowed except by way of Provisional Order of the Board of Trade, confirmable by Parliament. Moreover, the Board of Trade by Provisional Order authorize, under prescription of conditions, the acquisition of undertakings or land outside the area when in its opinion this was necessary or desirable in the interests of the undertaking already being carried on. Combination of local authorities for these purposes could be freely entered into on terms mutually agreeable to them. Undertakings or land established or purchased under the Act could not, without sanction of the Board of Trade, be leased or sold for a period of longer than seven years. Profits and rents were, after proper allowance of all items of cost, to go into a "common fund." This was not to be used for avoiding or reducing rates, but solely for the purposes and legal liabilities of the undertaking—and presumably for further extension of business. Accounts were to be made up as the Board of Trade might prescribe; and the Board's auditors would decide what sums could be put into and taken out of the "common fund." The power of audit of the Board of Trade was to be that applicable under the Electricity Acts, 1882 and 1928.

---

[1] 1921, 1923, 1924, 1925, 1927, 1930, 1938, 1939.

[2] Bill 32, House of Commons, November 1, 1929.

Thus the most enthusiastic supporters of municipal trading admitted the validity of safeguards—by due notice, by the minimum size of the area, by central control (of enormous significance) of loans and accounts.

The Bill of 1937[1] (debated March 4, 1938) made an important break from earlier Bills. As a matter of fact its shape was the result of incorporation of the chief amendments proposed by the Government at the Committee stage of the Bill of 1930.[1] Firstly, instead of an unlimited range of choice of undertakings, specific powers were proposed; and secondly, these powers were restricted to larger authorities. Thus county boroughs with a population of 150,000 could establish a Municipal Savings Bank. County boroughs and urban districts with over 50,000 population were to be permitted powers to trade in milk and cream, coal, bread (whether purchased or baked), bricks, and other businesses declared by the Minister of Health as authorized in accordance with a stipulated procedure. The additional powers authorizable could be obtained if (*a*) three or more local authorities had already received the power demanded by Local Acts. The Minister had the duty of prescribing conditions of notice, cognizance of objections, and holding a public local enquiry if objections were not withdrawn. The order once made would be still open to objection, the objection being notified by the Minister. The order would need confirmation by Parliament if twenty persons in the area lodged and maintained an objection within four weeks. Moreover, powers could only be acquired after the proposal had been accepted by a resolution of the council passed by a majority of not less than two-thirds of the members present and voting at the meeting, confirmed by a similar vote between one and two months after the original meeting, due notice being given to members and the newspapers of the meetings. Agreements for extensions with a neighbouring area or for combined administration between two or more councils is open to the undertaking authorities. The limits within which the total of all borrowing is possible are reduced to not more than one-twentieth of the total rateable value of the authority. The Minister of Health is to prescribe the form of accounts and these shall be audited by him as the accounts of county councils are audited, i.e. under full District Audit, with its penal provisions.[2] There then follow rules to govern the application of moneys received. These follow the evolution in private Acts relating to local enterprise in the last twenty years, and govern especially the provision of reserves, and the making of appropriations in aid of rates out of the net surplus.[3] Finally, the Minister of Health *may* order the discontinuance of any authorized business if it happens that the enterprise falls into a state of deficiency to the extent of a rate of 3d. in the £ in each of the three last preceding financial years, but this only after a public local enquiry. The Local Authorities

---

[1] Bill 19, House of Commons, October 29, 1937.

---

[1] Cf. Standing Committee B, May 21, 1930, cols. 4–6.

[2] Cf. pp. 104 ff. infra.

[3] Cf. pp. 138 ff. infra.

(Enabling) Bill,[1] debated on March 10, 1939, was identical with that of 1937.

None of these Bills received a second reading, except that of 1930, for only in that year did the Labour Party, members of which sponsored the Bills, command a majority, and that only by the aid of Liberals. It was possible for the Labour Government to press forward with this Bill, with amendments, but it was not sufficiently wholehearted about the matter. The Minister of Health, Mr. Greenwood, argued that it ought to be a Government Measure, and that "a good deal of revision" was necessary. The Government tabled so many amendments in Committee, that the Bill had to be withdrawn as no time was available for it. Perhaps the Government could not be resolute when at the mercy of Conservatives and Liberals.

The arguments in favour of the Bill in 1930 (its sponsors expressing their interest mainly in trading in coal, milk, meat and bread, and Savings Banks) were as follows. Local authorities had demonstrated their capacity and public spirit. By their public health services they had wrought a remarkable amelioration in the health and well-being of the population. It was impossible to deal with the adulteration and impurity of milk, and the quality of meat, among other foodstuffs, without an expensive Inspectorate, and even that could not abolish the evils. As for bakeries, it was argued by Dr. Salter, basing himself upon a co-operative concern serving the Borough of Bermondsey, that bread could be sold much cheaper, at a better quality, if the baking and distribution were concentrated in single hands than if shared among small rival firms. In addition, such rationalization made possible the use of machinery for baking and packing, and the avoidance of competitive distributing vehicles and salesmen. Costs would be diminished and the staff be given shorter hours, higher wages, and holidays with pay.[2] It was argued, further, that local authorities, with proper procedure, could and did provide their own equipment and building by direct labour considerably cheaper than tenders by private firms. As in the past the supply of water by municipalities had been obstructed for decades by the arguments of private enterprise, so now was the obstruction to the extension of municipal trading founded upon the same *laisser-faire* theories. "A township with anything like strong local patriotism, or a developed community sense, is really like a great family. . . . Why should not a family supply its own communal needs in this way?"[3]

---

[1] Bill 15, November 11, 1938.

[2] Parliamentary Debates, Commons, February 14, 1930, cols. 815–18.

[3] Ibid., col. 823.

The arguments against were that local authorities have already enough work to do, so that they are hard put to it to find sufficient capable councillors to undertake the responsibilities. There are no safeguards on municipal extravagance. Municipal trading would be unfair competition with the small trader, since it would be subsidized out of rates—to which he contributed. "It is a totally unfair form of competition." The unlimited authority in the Bill to set up businesses would enable local authorities to set up shops of all kinds and undercut existing traders within and without the area. The "captainship of industry" would be destroyed; the energies of successful industry abolished. The success of local authorities in municipal enterprise hitherto had been in monopolies, which, at any rate in the case of tramways, had been first commenced by private enterprise(!). This was another step towards "socialism." The ordinary business man was an expert; the local councillor an amateur, without the incentive (like starvation) to discover and supply public wants. It was rare indeed to find men of first-rate business ability willing to serve the municipality without payment. Municipal failures came to the rates for recoupment. The co-operative societies were doing successful work in distribution and marketing—they would object to the extension of the local authorities into their field.

It was rejoined that the small trader was, in any case, being outgrown by the multiple shop organizations. Ample safeguards against extravagance and misguided efforts were those of public opinion especially as expressible in the annual elections of a third of the councillors, as well as those specific ones contained in the Bill. The former Lord Mayor of Manchester, Mr. E. D. Simon, showed that it had been possible in that city to get councillors and officials who had conducted enterprises with a loan-capital of over £30,000,000 (for the four chief undertakings) as efficiently as the best type of private enterprise.[1] The greater the freedom and responsibility given

---

[1] In the course of his speech Mr. Simon (col. 846) twitted opponents with their fear of "Socialism." He gave these amusing examples of such an attitude:

"In 1920 I was a member of a committee, referred to by the Hon. Member for Walsall (Mr. McShane), who introduced the Bill, to inquire into the question of the municipalization of the Manchester Milk Supply, and their report was sent up to the city council recommending it. The chief opponent was the Chairman of the Manchester Gas Committee, gas in Manchester having been municipalized for eighty years, and he made a passionate speech denouncing it as a Socialist proposal, saying it was quite inconceivable that the municipality should manage the Manchester milk supply as well as the experienced business men who were making such a success of it. It was pointed out to him that his gas committee, to local authorities, the better the men who will be attracted to serve.

In the debates March 4, 1938, and March 10, 1939,[1] no substantially new arguments on the main issue were introduced. Those who opposed the Bill now found it a useful line of resistance, embarrassing to Labour members, to emphasize the damage which extensions of municipal enterprise might do to co-operative societies —they gave the impression that they would feel such damage keenly. It was also urged that the more commodities and services supplied by the municipalities, the greater the risk of the electoral system being corrupted by promises of price reduction.

which he was constantly boasting was the most efficient gas undertaking, private or municipal, in the country, was also a case of municipal Socialism, but this made him very angry, and he flatly denied that it was anything of the kind.

"I happened to go to Bristol a few days afterwards, and I talked to a gentleman who was chairman of the new municipal docks committee there, a very successful and fine piece of municipal trading. Knowing that their gas was provided by a private company, I asked him, 'In view of the fact that most gas undertakings are municipalized, and in view of your success in running the docks, why do you not municipalize your gas undertaking?' This caused him great perturbation, and he said, 'We would never dream in Bristol of going in for a piece of Socialism of that sort.' So there you have, in Manchester, gas as a respectable piece of trading, with a Conservative chairman, but in Bristol it would be a case of gross municipal Socialism."

[1] Bill 15, November 11, 1938.

Chapter Four

THE LEGAL FRAMEWORK

THE survey of the development of municipal enterprise has indicated its legal basis. There was a period of experimentation by Private Acts secured by individual authorities; then came general laws, like the Clauses Acts, or such public general statutes as, say, the Public Health Acts; a third stage of development by Private Acts and Provisional and Special Orders, made under the aegis of the central administrative departments, followed.

It is not our intention to give a detailed account of the law. It is proposed at this point merely to state the main principles. We direct attention to, (1) the process by which local authorities obtain their powers, (2) definition of the area of the undertaking, (3) the nature of the powers given, (4) the obligations to supply, (5) the financial machinery, including loans, charges, rates and accounts, (6) the protection of the consumer, (7) the scope and methods of central administrative control, and finally, (8) the part played by the law courts. Only in the case of (1) are we concerned at this point to deal with the practical effects of the law in any detail.

(1) THE ACQUISITION OF POWERS

English law does not give a general enabling power to local authorities. On the Continent, though the local community is subordinate to the general law, deriving its powers from statutes, nevertheless, as has been repeatedly explained in Parliamentary debate, statutes have vested them with a general power to do that which is for the good of their community. But under French law the interpretation of this general permission is left to the Administrative Law Courts, and the definition has been interpreted so restrictively that municipal undertakings in France are rare.[1] However, the generality of the statute exists. Under Prussian law local authorities also have their field of power limited by restriction of their enterprise to their area, and the obligation to find money for compulsory services stipulated by the State. Yet some could and did make use of their authority to trade in milk, land, restaurants, theatres, concerts, halls, pawnshops, banking, breweries, bakeries, hotels. In reaction from this, by the Local Government Order of 1935, the Nazi Government has subjected German municipalities to particularly stringent conditions regarding trading undertakings.[1]

---

[1] Cf. Félix, *L'Activité économique de la Commune*, Paris, 1932; and 1929, *Report of International Congress of Local Authorities*.

The English system is one not of general but of specific powers, and those specific powers must be obtained one by one either for all local authorities of a given class, or individually by Local Acts. If a local authority wishes more powers than those given by general statutes, or wishes to extend the accepted statutory range of municipal undertakings, it must, like Birmingham for its bank in 1915, ask for special powers from Parliament.[2] If it so much as extends its ordained bus route by forty yards to execute a turning circle, it is, like Leeds Corporation in 1928, haled before the High Court. It may not change from trams, where fully empowered, to trolley-buses or buses, without a Private Act.[2] There is also a kind of subordinate legislation which is a direct derivative of the public general statutes; this takes the form of Provisional Orders, Special Orders, or Departmental Orders. We deal with these presently; the principal question now is to consider the nature of procedure by Private Bill, for that has received the severest criticism as the chief means of progress for public-spirited local authorities.

"A Private Bill is a Bill for the particular interest or benefit of any person or persons."[3] The local authority initiates it, asking for powers which will be mandatory upon all persons and property within the area specified. As such a grant of powers may affect the interests of people in or contiguous to the locality, Parliament gives them a *locus standi*, a right to oppose the Bill. As also the powers may affect the public interest by establishing a principle, Parliament requires a very thorough enquiry by special procedure in both Houses. As a prelude to this it demands extensive advertisement, and notice to all parties concerned and a variety of documents, plans, statistics, and other supporting evidence for itself and for the Government departments within whose field of administration the particular undertaking falls. The Bill passes through the usual stages in both Houses, and may be upset at any stage.

---

[1] Stier-Somlo, *Handbuch der Kommunalen Verfassungsrecht*, 1928; and Süren, *Die Reichsgemeinde-Ordnung*, 1936, Kommentar, p. 222, secs. 67 ff. E.g. "The municipality may establish or substantially extend economic undertakings only (1) if the undertaking is justified by public ends; (2) if the undertaking stands in proper relationship to the capacity of the municipality to operate and to foreseeable needs; (3) if the object is not or cannot be better and more economically satisfied by some other agency."

[2] But see infra, p. 285.

[3] Cf. Report Select Committee on Private Bills, No. 158, App. I; also May, *Parliamentary Practice*.

The most important of these is the Committee stage. Here, in a particularly small Committee acting under a procedure in which the political element is excluded in the maximum degree, and in which even the utterance of the word "political" has been declared to be a solecism, there is a rigorous process of proposition and opposition, of proof and counter-proof, examination and cross-examination, of evidence so far as possible statistically determined. The evidence is given by experts, and analysed, advocated, or refuted by counsel at the Parliamentary Bar who are highly expert in the particular field of the trading undertakings. Some among a half a dozen names always appear in these cases. All who have either been present at the Committee stage, or examined the documents and verbatim reports of such, cannot fail to admire the thorough sifting of the issues. After this no one can complain that his interests and claims have not been thoroughly investigated. Whether the members of Parliament who form the Committee can and do give the answer solicited by the parties is, of course, a different issue. In asserting that Private Bill Committees do not act "politically," we do *not* mean that the decision is exempt from bias. Of course, the decision to extend or not extend is dependent upon political sympathies and antipathies. But where the enterprise—gas, water, electricity, transport, even municipal banks—is an accepted one, the issues are narrowly drawn.

The three important criticisms directed by the proponents of municipal enterprise against this system are its expense, its time-wasting character, and its restrictiveness. It is true that the process is expensive. When a Bill is not opposed at all, its average cost (if it is concerned with works of not unusual dimensions) is roughly £3,200. If a Bill is opposed in one House only, it is likely to cost about £4,500. If it is opposed in both Houses, it may cost £7,500 and over. The big sums are taken by agents, counsel, and experts: they are responsible for more than half of the entire expenditure. The rest consists of incidental expenses of travel and subsistence, etc., fees paid to Parliament, amounting to about 10 per cent of the total expenditure, and the cost of documents, plans, printing, and shorthand reports, etc.

These are substantial totals, but, except in a few extraordinary cases, they are a very small proportion of the total capital sum needed to begin the undertaking. For example, the Barnsley Corporation Bill for the acquisition of the local gas undertaking involved a capital sum of about £160,000. What business man would regard the costs of promotion of, even let us say £8,000, as excessive? On the other hand, we have a case like that of the Ramsbottom Urban District Council, where the cost was £2,025, equal to the cost of two buses, or, as was laboriously calculated, 2s. 7d. per head of the population.[1] The total bus fleet is eleven, and the cost of promotion, being about a fifth of this capital, seems rather excessive. But the answer is that we no longer live in a transport era where a place like Ramsbottom, with a population of about 17,000 people, should establish its own independent bus service. The Return of Tramway and Trolley Undertakings enables us to strike (probably) a general average of expenses of promotion. It must be remembered that transport powers are often sought in the same Bill as other powers, and thus the expenses of promotion are shared. In 1927–28, in an authorised capital at that date of £96,024,578, Legal and Parliamentary expenditure attributable to tramways would seem to amount to £721,561. (This concerns authorities still appearing in the Returns at that date.) Tramway companies with a capital of £27,439,240 had a return of expenditure under the same rubric of £1,034,073.[2] At the same date, Trolley undertakings of local authorities with an authorized capital of £7,010,285 returned Legal and Parliamentary expenditure as £19,814, and companies £143,500 on a capital of £2,000,000.[3] Such expenditure could be reduced by reduction of the House fees, which are governmental, and by a statutory limit to the fees chargeable by counsel and agents.

As to the length of time, in normal circumstances a local authority must wait between six and twelve months from the time it has deposited the Bill before all stages are completed. No one can seriously complain that this is damaging. Until 1930 all local Bills went to a special Private Bill Committee called the Local Legislation Committee. This system provided for a body with a continuous interest and experience of local government matters, secured continuity and uniformity of decision. It did excellent service. But concentration in one committee caused a slowing-up of the work. In 1930 it was abolished and replaced by several ordinary private Bill committees. The Select Committee of 1937,[4] which enquired into the experience of the past six years, came to the conclusion that damage had been done by the heterogeneity of principle introduced by the variety of committees. It thought that if powers were given to the Chairman of Ways and Means to sift Bills so that like went with like to the same committee, and if unopposed local legislation were all dealt with by a new Special Committee, this would remedy the observed defects. This was done.

---

[1] Vol. i, p. 253, Minutes of Evidence. Royal Commission on Transport, 1929.

[2] Cf. Return of Tramways and Light Railways, 1927–28. 1927–28 has been taken as it is before the big abandonments of tramways.

[3] Cf. ibid., 1927–28.

[4] Cf. Report Select Committee on Private Bill Procedure, Local Legislation, April 1937, No. 112.

The third criticism is more material. It is true that any long, laborious, and expensive procedure must act restrictively. If there were a general unconditional enabling Act, local authorities whose expenditure on, and concern for, education, health, and libraries is scandalously meagre, might branch out into a variety of undertakings. But the question is whether on grounds of high policy this is desirable. Experience leads us to believe that it is not. Even the Labour advocates of a Local Authorities Enabling Bill thought it proper to restrict developments by specifying them and submitting them to Departmental and Parliamentary safeguards. Before a large expenditure is undertaken on the security of the rates to finance an enterprise which will leave consumers with little option but to consume the municipality's services at prices determined by its authority, there should be a diligent enquiry into the technical and financial foundations of each scheme. For there is no particular quality inherent in municipalization which necessarily works better for consumers and producers than private initiative may do. The advantages claimed are wholly or in part obtainable only if a monopoly is granted. A monopoly is always a danger: its potential benefits are possessable only by regulations appropriate to abating its specific dangers. If, of course, there is an unconditional attachment to the ideal of collectivization, no matter at what cost, then the matter is settled by its unconditionality. If there *is* a regard for cost and service, there ought to be no objection to a thorough investigation like that made in Parliament. A very great service indeed is being rendered to the local community by the co-operation of the departmental experts who report on the financial and technical conditions of the Bill, and of the members of the committee and expert witnesses and counsel who submit proposals and objections to a thorough sifting. When the scheme has been accepted, with or without amendment, the local authority may proceed with confidence. Of course, the impossibility of major experimentation arises from the fact that as a rule collectivist proposals are under examination by a predominantly capitalistic Parliament.

Certain improvements on this procedure can be urged. Firstly, every five or seven years Parliament ought to generalize to all local authorities of a population and rateable value about equal to that of the pioneer the new legislation, whether wide or narrow in scope, introduced and remodelled as a result of the experience in that period.[1] As a matter of fact, as local authorities severally experiment, Parliament devises new model clauses, which are "common form." These are finally embodied in Model Bills, e.g. the Model Water Bill of 1924, the Model Gas Bill of 1923. But these models must still be applied for individually. The appropriate administrative department would still have power to settle the technical conditions before loans could be made.

The foregoing considerations apply with sufficient force in a capitalist environment; they would apply even more forcibly in a society in which state control of industry became very extensive. No modern state can afford to permit large groups of its citizens to take entirely independent decisions on the direction and quantum of investment or the call on the labour market.

Secondly, there are grounds for amending the preliminary process that must occur before the Parliamentary stage is reached. There is a vexatious preliminary stage. This procedure was first devised by the House of Lords in 1872.[2] Boroughs and Urban Districts must give ten days' public notice of the meeting of the Council and pass the resolution to promote the Bill by an absolute majority of all the Councillors; publish the resolution in the local Press and send it to the Minister of Health for his approval. Any local government elector in the area may send an objection to the Minister, or the Minister may order a local enquiry before approving the resolution. The Bill may then be deposited in Parliament, but the Council cannot go further until another resolution is passed in accordance with the requirements which governed the original resolution. At this point County Councils and Rural District Councils have completed the preliminary process. But Boroughs and Urban Districts which are most affected by the situation have further stages to pass through. Notices of the deposit of the Bill and a "town's meeting" must be posted. All electors are entitled to be present. The Bill must here be explained and the resolutions put. Whatever the decision it *may* be challenged, either by one hundred of the electors or one-twentieth of the total register (whichever is less) or by the Council, when a local poll decides the matter. If unfavourable the Bill must be withdrawn. These requirements are very troublesome. There are no halls capable of holding all who are entitled to attend the meeting. Meetings are ludicrously small. In Birmingham in 1924, only forty people attended; in 1936, when Barnsley was preparing for the purchase of the gas undertaking, of 38,948 voters only 112 came to the meeting to vote for it. Polling is expensive, but the number voting is very small. In thirty-four polls held between 1920 and 1925 the average of those voting was only 15 per cent of the electors.[1] On the Brighton Bill in 1931, to merge the buses in the area, 23 per cent of the electorate voted; on the Dover Bill in January 1936 to scrap trams and substitute buses about 20 per cent voted; on the Barnsley Bill 7½ per cent voted. The Royal Commission on Local Government[2] recommended the abolition of this procedure. It still remains.

---

[1] Even to this course certain experts urge objections, founded on the view that each authority ought to be considered on its own merits, since the tradition and quality of civic government differ so markedly from place to place.

[2] Amended by Borough Funds Act, 1903, and consolidated in Local Government Act, 1933, Sections 253 ff.

Thirdly, we are extremely dubious about the part played by the House of Lords in this procedure. It has, legally, powers as great as those of the House of Commons. Owing to the prolixity and expense of the procedure, it is probably fair to say that it has greater powers *de facto*. Yet the House of Lords has no popular representative quality. Some of its decisions have not in our opinion been in accord with the weight of evidence or right reason. For example, the monstrous refusal to allow Oxford City to acquire the undertaking of the Oxford Company against the rival claim of the Wessex Power Corporation;[3] and its ill-advised refusal to change the financial terms on which Manchester was obliged to supply in bulk water to certain of its neighbours.[4] The argument which seemed to hold good in the latter case was that once a price had been fixed it was *a contract*, and therefore sacrosanct; and this in spite of the fact that there was a serious burden on Manchester as costs had risen, while at least one of the neighbours supplied could put surpluses to aid of rates at the price.

---

[1] Royal Commission on Local Government, Minutes, vii, 1426.

[2] Final Report, 1929, section v.

[3] Oxford Corporation Electricity Bill, House of Lords, May 10–17, 1938; Committee, Report of Evidence.

[4] Manchester Corporation Bill, 1929, House of Lords Committee, Verbatim Report.

PROVISIONAL AND SPECIAL ORDERS

In order to make easier the acquisition of certain powers, Parliament devised the Provisional Order. Several general statutes, for example, the Tramways Act, 1870, Gas and Water Facilities Act, 1870 and 1873, the Public Health Act, 1875, and the Local Government Act, 1888, stipulated that local authorities might obtain powers by permission of the relevant Minister. A local enquiry was conducted by him in order to ascertain the merits of the demand, and opponents appeared to put the case against. But advertisement and notice were required in order to inform potential opponents. The Minister might find no substantial ground for the Order, and the local authority was then thrown back on a Local Bill if it decided to proceed. If the Minister granted the Order, it had subsequently to be confirmed by Parliament, and if opposition has not been withdrawn as the result of negotiations at the local enquiry stage, then when the Bill came before the Select Committee of the House, the same procedure as in a Private Bill is followed. It was rare for Parliament to reject Orders, since their scope was limited and there had been a thorough preliminary sifting of the case. Provisional Orders could be expensive when challenged. This procedure no longer has significance for transport because tramways are not being established, and trolley-buses and other buses come under Private Acts and the licence of the Road Traffic Commissioners. Water undertakings are mainly concerned to get new sources of water, usually in the domain of some other local authority or affecting the interests of several authorities *en route*: a Private Act is indispensable. Where Provisional Order methods formerly applied to extensions and development of gas and electricity undertakings more simplicity was required.

Hence, for gas and electricity undertakings Parliament has for some purposes—mainly of development, not original establishment—devised a more businesslike, flexible procedure, that of Special Orders. For example, to release gas undertakings from old-fashioned restrictions, the Gas Regulation Act, 1920 (Sec. 10), the Gas Undertakings Act, 1929 (Sec. 7), and the Gas Undertakings Act, 1934 (Secs. 15 and 17), empowered the Board of Trade to confer on undertakings the power to obtain a supply of gas in bulk from any source, to give a separate supply for industrial purposes within their own area, to supply beyond their areas (local authorities) where gas is not already being supplied, to amalgamate undertakings by agreement among the principals, to modify the provision of special acts as may be necessary to provide for the proper and efficient conduct of the undertaking, etc., etc. Now the Special Order does not pass through the stages of a Private Bill: it only requires approval by resolution of both Houses of Parliament. But there is still expense. Even when unopposed such an Order costs £300 on average, and this is considerably exceeded if opposed.[1] And in regard to all matters to which Special Orders were applicable until 1929, procedure for giving notice to consumers of impending change was elaborate. It also afforded them "an opportunity to bring before the Board of Trade any matters of public interest affecting the operations of the undertaking."[2] Subsequent legislation reduced the formalities necessary for a number of matters; and made them subject only to a Departmental Order, that is an Order made by the Board, after opportunity of hearing given to opponents, but not subject to Parliamentary confirmation.

By the Electricity (Supply) Act 1919, a similar flexibility was conferred on undertakings; and indeed this granting of flexibility was the cause of the demands made for equal treatment by the gas industry. Many matters which by the Electricity Acts to 1909 could only be effected by Provisional Order could henceforth be effected by Special Order. The simpler Departmental Order method was applied to several subjects—for example, supply to the fringe of an authority's area and supply in bulk. It should be realized that these procedures throw the local authorities under the permeating control of the Central Departments.

(2) AREAS

Until recent years (with a number of exceptions going back about half a century) the area of the municipality was by law the area of the undertaking. It took time to realize that this led to serious technical diseconomies. Thereafter the statutes, private and public, and the orders deriving from them, began to make possible the extension of the area of supply. For example, tramway and bus undertakings were empowered to make inter-running arrangements with neighbouring authorities, and were further permitted to establish joint committees of management including several authorities. The Road Traffic Act of 1930 subjected the whole of this process to the co-ordinating authority of the Traffic Commissioners in each of the eleven Traffic Areas. Secondly, the Electricity Lighting Act of 1909 made it possible for individual authorities to extend their range of supply, and instituted the device known as a Fringe Order. By this instrument the local undertaking received the power to supply consumers in areas on its borders, thus enabling it to supply a consumer more cheaply than the authority within whose boundary he resides, but at a point too far off from the centre for supply to be economical either to consumer or producer. Section 4 of that Act was premonitory of the Grid, for it permitted the supply of electricity in bulk by authority to authority. The Electricity (Supply) Act of 1919 made it possible (the House of Lords had contrived to exclude the *mandatory* force of the Bill) to establish Joint Electricity Authorities consisting of several undertakers under the direction of the Electricity Commissioners. The permissive power proved insufficient (it is to be hoped that the House of Lords was satisfied with its handiwork), with the consequence that after seven years of difficult negotiation and enquiry ending in the Weir Committee Report, the Electricity (Supply) Act of 1926 established the Central Electricity Board with the job of de-localizing the *generation* of electricity. This solved the problem of areas in electricity generation,[1] but not distribution.

---

[1] Second Report of National Fuel and Power Committee, Cmd. 3252, 1929, p. 6.
[2] Ibid.

The Gas Undertakings Act of 1934 (Sec. 17) enables undertakers in contiguous areas to take supplies in bulk from each other on agreed terms. The second part of that section enables the Board of Trade to authorize any undertakers to supply any other undertakers through pipes outside their authorized limits, and even to lay pipes for that purpose. In the Gas Undertakings Act of 1932, another method of territorial co-operation had been made possible in that a gas undertaking could, with the approval of the Board of Trade, invest in the loan or in the share-capital of a gas company up to a specified amount.

In the case of water supply, no doubt owing to its urgency, and to the very obvious fact that sewerage arrangements and drainage, which are vitally connected with water supply, were patently matters of wide range, local authorities have since 1875 had the power to form Joint Boards with independent financial powers. Since World

[1] Yet attention ought not to be denied to experts who argue that small locally placed Diesel engines might offer a more economical solution than that of the Central Electricity Board. Some company and municipal technical managers also complain that they are, in effect, subsidizing the grid by the export to the Central Electricity Board of electricity at little more than the cost of fuel.

War I a number of enquiries have resulted in clearer recognition by the local authorities of the necessities, and in more insistent persuasion by the Ministry of Health to establish joint arrangements. The results have been broadly of three kinds. First, the County Councils have been given the power to aid small districts by grants.[1] Regional Advisory Committees have been set up in eight areas to co-ordinate the policy of the authorities they include; and by the Supply of Water in Bulk Act of 1934, statutory water undertakings may enter into agreements with any others for the giving and taking of a supply of water in bulk.

(3) DEFINITION OF POWERS

As already explained, local authorities possess the powers they are given and nothing more. It is even a rule of legal interpretation that the statutory definition is to be not generously but austerely interpreted, though municipal authorities seem to enjoy slightly more generosity than companies.[2] But the Courts, dealing as they are here not with sovereign bodies, but with corporations who are creatures of the law, are ever ready to check the pretensions of a local authority when it verges upon action *ultra vires*.

Moreover, when a local authority decides to establish an undertaking, it thereby assumes certain obligations, which are the consequence of its having the monopoly. For example, in the matter of water supply, apart from the obligations concerned with quality, regularity, and price, there are such duties as sufficient provision for sewers and drains, for cleansing and watering the streets, for the provision of fire-plugs. There may be small variations of the powers and duties, but fundamentally the latter are those of the Clauses Acts and Model Bill. All such powers and obligations, in the cases of all the undertakings as well as that of water, are subject to sanction and direction by the administrative departments in Whitehall.

(5) FINANCIAL BASES

The general statutes or the private Bills include certain rules to ensure financial probity and to protect the consumers and ratepayers. The Local Government Act of 1933, which directly follows the Public Health Acts of the last sixty years, empowers local authorities to borrow for the purpose, *inter alia*, "of acquiring any land which they have power to acquire, for erecting any building which they have power to erect, for executing any permanent work, for providing any plant, or for doing any other thing which they have power to execute, provide or do." The security for loans is now, by the Local Government Act, 1933, Section 197, "all the revenues of the authorities . . . and all Securities must rank equally without any priority.' The power to borrow can only be exercised with the consent of the sanctioning authority. This is, in general and for water supply, the Minister of Health; in the case of transport, the Minister of Transport; of electricity, the Electricity Commissioners; of gas, the Board of Trade. The Local Government Act provides that the sanctioning authority is to determine the period within which the local authority must repay the sum borrowed. The conditions of the sanctions for loans and the principles and terms of the repayment of the loans are discussed later. Closely allied with the subject of loans and loan-sanctions is the acquisition of land for the purpose of the undertakings. Generally, local authorities may obtain land necessary for any statutory purpose with the consent of the Minister, by agreement with the existing owners. There is also the power to obtain land compulsorily, and such power is special, being obtained either by private Bill or by an Order permitting the establishment of undertakings, for example, for water undertakings the Public Health Acts, for electricity undertakings the Electricity Act of 1909, Section 1. There is an elaborate procedure for the compulsory acquisition and valuation of the land, now regulated by the Acquisition of Land Act (Adjustment of Compensation), 1919, in addition to the Acts giving the power to acquire.

---

[1] Public Health Act, 1936, 26 Geo. V, and 1 Edw. VIII, ch. 49, sections 307 and 308.

[2] Cf. Street, *The Doctrine of Ultra Vires*, 1930.

There are provisions to secure reserve funds of a permissive nature. In the case of electricity this is achieved under the Act of 1926, which does not allow appropriations in aid of local rates out of a surplus of an electricity undertaking until there is a reserve fund of over one-twentieth of the total capital expenditure on the undertaking. This applies to all local authorities, whether their electricity undertakings were started before or since 1926.[1] In the case of water, local Acts or Orders merely authorize reserve funds, usually limited to one-fifth of the capital expenditure, to be utilized to meet any extraordinary claim on the undertaking, or for the renewal of any part of it. In regard to gas undertakings, this is achieved by some private

---

[1] Publicly owned electricity undertakings are not allowed to retail appliances at rates below the recognized trade prices.

Acts (under pressure of the Board of Trade when reporting upon local Bills to Parliament), e.g. that of the Oldham Corporation of 1909, which recited the various uses to which the revenue *may* be put, including a 1 per cent reserve on the aggregate capital expenditure. And finally, tramway and bus undertakings are regulated in the individual private Acts.

Since the World War I there has been a notable change in a number of local Acts relating to water and gas in regard to appropriations of surpluses from the undertakings in aid of rates. Clauses are included to secure that the charges should be so regulated that the undertaking should make neither profit nor loss. As regards electricity, we have already remarked that by the Act of 1926 the appropriation in aid of rates cannot be paid at all until the reserve fund reaches a certain minimum, and even when that occurs no more than a sum of 1½ per cent of the outstanding debt may be so appropriated.[1] It should be remembered that apart from these post-War exceptions, the local authorities are free to aid the rates out of the profits of the undertaking. They are, like other profit-making concerns, liable to income-tax; and they must also be assessed for rates.

It is not our intention to discuss the complicated rules for their assessment, but it is important to indicate the magnitude of these payments.[2]

Charges are regulated, either in the general statutes or in the private Acts or in the orders implementing the general statutes. They are normally of the maximum type. But in the case of gas, it is enacted that all consumers in the same conditions shall receive the same treatment; and in the case of electricity there are, in addition, more elaborate stipulations to secure the greatest diversity of load, to meet the peculiar nature of electricity, which cannot be stored. The problem of price is one of the most important and most interesting of those we have to discuss.

As a consequence of the power of audit vested in the Minister of Health by the Local Government Act of 1933 (codifying the earlier provisions of the Public Health Act of 1875 and the District Auditors Act of 1879), the Minister of Health may prescribe the form of accounts to be kept by local authorities. This has been done, and accompanied with the expression of departmental opinion on the principles of sound financial control, but the effect is limited to authorities subjected to District Audit, which includes only a small number of those with trading undertakings.

---

[1] The different treatment of electricity as compared with gas seems to be due to the recognition in 1926 of the possibility of rapid technical advances in the industry, and therefore the special necessity of securing reserve funds.

[2] Cf. Alban and Lamb, *Income Tax as Affecting Local Authorities*, 1936; and Wilton Booth, *Rating and Valuation of Public Utility Undertakings*, 1935.

RATES AND INCOME TAX ON MUNICIPAL UNDERTAKINGS

Authority	Revenue	Rates	Percentage rates-revenue	Income tax "A" and "D"	Percentage tax-revenue
		ELECTRICITY*			
	£	£		£	
Burnley	128,822	11,925	8·0	2,375	1·8
Chesterfield ..	112,079	9,949	8·9	6,580	5·9
Dewsbury ..	73,537	2,814	3·8	3,977	5·4
Stockton-on-Tees ·	97,596	3,128	3·2	2,700	2·7
		TRANSPORT*			
Birkenhead	323,648	1,798	0·56	8,500	2·6
Birmingham ..	2,750,320	69,875	2·6†	39,624	1·5
Rawtenstall ..	83,384	588	0·7	5,617	6·7
Widnes	31,917	277	0·7	105	0·37
		GAS*			
Burnley	156,581	11,388	7·8	3,232	2·1
Dewsbury ..	78,618	5,135	6·5	2,126	2·7
Stockton-on-Tees ·	179,077	4,301	2·4	4,951	2·8
Widnes	104,736	4,185	4·0	2,555	2·4
		WATER‡			
Ashton-under-Lyne District	83,936	12,898	15	11,870	14
Barrow-in-Furness	41,200	7,989	19	4,284	10
Basingstoke ..	9,564	1,823	17	907	10
Birmingham ..	944,568	166,005	18	59,820	6

* Source: Annual Accounts Authorities; Year 1938.

† Though the traffic revenue is 50 per cent more for motor-buses than tramways, rates on the former were £13,595 and on the latter £50,602. Generally, tramways and trolleys pay much higher sums in rates because they use more rateable property—tracks, poles, overhead wires, etc. Where the rate per cent is low, it can be taken that figures principally relate to motor-buses.

‡ Source: Year Book, British Waterworks Association; year, 1935.

No statute of Departmental regulation prescribes detailed accounting returns from water authorities; but these authorities generally follow the form of accounts prescribed by the Institute of Municipal Treasurers and Accountants. In the case of gas supplies, the *Statutory Return Relating to all Authorized Gas Undertakings*, including details of manufacture and supply and finance and prices, imposes at least a basic uniformity.[1] The Electricity Returns are exceedingly detailed;[2] and there is further prescribed by the Electricity Commissioners a full form of accounts especially established for all electricity supply companies with the exception of the rather special power supply companies, which have their own accountancy regulations. Finally, although Annual Returns are required in the case of Tramway and Trolley-bus Undertakings,[3] there is no statutory form of accounts. But in this case, as well as in the case of motor-buses under the management of local authorities, and equally in the case of water, gas, and electricity, uniformity has been brought about by the establishment of agreed forms by the Institute of Municipal Treasurers and Accountants and the Associations of Local Authorities. Of course, these do not impose the same *answers* to the accounting problems as they present themselves to the municipalities. A fully significant uniformity can only be obtained if it commences in the earliest stages of the compilation of accounts.

(6, 7, 8) CENTRAL ADMINISTRATIVE CONTROL

Underlying this legal framework and a condition *sine qua non* of its effectiveness is the administrative authority of the departments in Whitehall. The Board of Trade for gas undertakings, the Ministry of Transport for trams, trolley-buses and omnibuses, the Electricity Commissioners and the Ministry of Transport and the Central Electricity Board for electricity undertakings, and the Ministry of Health for water, markets, cemeteries, and general surveillance of the administrative organization and area of local authorities, have far-reaching powers connected with the original grant of authority to trade and its terms and conditions, and thereafter with the occasional control of the further financing and administration of the undertaking. The Ministry of Health, for example, conducts a penetrating and effective audit into the accounts of all the local undertakings in authorities other than County Boroughs and Municipal Boroughs, and in some cases acts there also when the Borough has adopted District Audit.

---

[1] Board of Trade, Return relating to all Authorized Gas Undertakings in Great Britain, Part I. Particulars relating to the Manufacture and Supply of Gas. Part II, Finance and Prices.

[2] Electricity Commission, Return of Engineering and Financial Statistics relating to Authorized Undertakings in Great Britain . . . for Public Authority Undertakings and . . . for Company Undertakings.

[3] Ministry of Transport, Tramways and Light Railways (Street and Road), and Trolley Vehicles Undertakings, Annual Returns.

Wo do not wish to overstate the extent of Parliamentary and Departmental control and intervention, but the foregoing outline of the legal framework must already have given the impression, quite properly, of a very effective reduction of the free will, that is, the power to do harm or good, to make mistakes or be responsible for achievements, of the local authorities. Nor can one read the law without the sense that the central departments seem peculiarly to have been placed in the position of defenders of the consumer. There is no express clause to this effect in any of the statutes; but, taken in combination, the various powers devolved to the departments in regard to the price, purity, regularity, and quality of supply of the commodity install them in such a situation; and we shall see in fact that they do function as the advocates of the consumer. This regulatory and appellate position of the administrative departments must be borne well in mind in the whole of the ensuing discussion.

Nevertheless, the initiative in proposing an enterprise rests with the local council and electorate; extensions and expansions are in their power of proposal; price policy, the pressing of sales, the acquisition of more consumers, and the supply of more per head, the internal organization of their area, their recruitment and management of staff, the husbanding of their resources—in other words, the dynamic guidance and utilization of the factors of enterprise are fully committed to the local authority. It could go far towards ruin before statutory or departmental controls arrested it.

Finally, the local authorities, with the powers thus conferred upon them by both statute and administrative order, operate within the legal system and principles as implemented by the ordinary law courts. The ordinary law courts therefore are called upon to define the law giving the local authorities their powers and obligations; for example, they have decided the meaning to be attached to the term "fair value" in the Tramways Act of 1870; they have decided what is and what is not "a loan"; what is a "pure and wholesome" supply of water, and so on. When they make by-laws arising out of the powers granted them, these may be quashed on the grounds that they are *ultra vires* or unreasonable.[1] Further, they may be compelled by the courts to carry out the duties which have been imposed upon them: to supply water, gas, and electricity, though, for various reasons, chiefly financial, reluctant to do so, and on the principles of pricing stated in the law.[2] It is difficult to exaggerate the wholesome protective function of the law courts, especially from the standpoint of consumers. And in the course of carrying out those things which are *intra vires* and reasonable local authorities may still be punished for causing a nuisance to others, for negligence, for torts committed by their servants in the course of their duties, and for breach of contracts.[1] They benefit from the Public Authorities Protection Act, a small advantage over ordinary undertakers.[2]

---

[1] Street, op. cit.

[2] Cf. Attorney-General *v.* Wimbledon (1939), vol. 56, No. 10, T.L.R.

Our next task is to show the powers and obligations given to local authorities and central administrative control in actual operation.

---

[1] Cf. G. E. Robinson, *Public Authorities and Legal Liability*, London, 1925.

[2] Cf. Jennings, *Law Relation to Local Authorities*, 1935, 805.

BOOK TWO

FACTORS IN PRODUCTION

The Factors in Production may be conveniently treated under three heads:

I. Financial Considerations
II. Administrative Organization and Personnel
III. The Area and Technology of the Undertaking.

Failure in any one of these produces inefficiency.

PART ONE

CHIEFLY FINANCIAL

Chapter 5. Inception of Schemes and Counting the Cost
„ 6. The Purchase of Supplies, Land and Undertakings
„ 7. Loans, Depreciation and Reserves
„ 8. Rate Aid and Profits and Losses

Chapter Five

INCEPTION OF SCHEMES AND COUNTING THE COST

INCEPTION OF AN UNDERTAKING

Discussion of the means whereby local authorities acquire their powers from Parliament or Whitehall must certainly have proven that undertakings are never commenced except after the most laborious process of investigation of financial and social soundness. They have to jump an extremely high hurdle in the first stages of discussion in the locality, special resolution by the council, public meeting, and possibly a poll, which is a local referendum. Every opportunity is given to the coming consumers to hold up the scheme on any of a multitude of objections. There are frequently long discussions with the appropriate central department before the department or Parliament is formally approached.

When Gateshead, in 1938, asked Parliament for power to take over its transport from the company which had managed it since about 1880, the Ministry of Health observed that the city was in a special area and in receipt of assistance from the Special Commissioner.[1] When Barnsley petitioned to take over the supply of gas for its area, there was a profound enquiry into all the circumstances relevant to its competence, based upon the history of its administration and its present financial position—in other words, the commercial trustworthiness of the Council. In this enquiry the report of the District Auditor of the Ministry of Health played a very important, perhaps a decisive part. It was shown among other things that for some years there had been deficits on the water undertaking which had not been made up year by year, and that the corporation had borrowed £10,000 from the electricity undertaking reserve, contrary to the provisions of the law, for other purposes of the Corporation.

When in 1931 Mansfield Town Council wanted to reconstitute its gas-works, the Board of Trade refused sanction until the possibility of bulk supply had been explored. The Board knew that Chesterfield had been able to negotiate for bulk supplies with the Grassmoor Colliery at a price of 6d. per 1,000 cubic feet purified, and that there was a large volume of coke oven gas in the district. It was found that if the proposed reconstruction of the works were carried out the cost per 1,000 cubic feet into holders would be 1s.10·78d; but that, even after paying the cost of mains to carry the coke oven supply, the cost into holders would be only 9d. It should be noticed that prior to this the Council had the evidence of two gas experts, and had negotiated for two years with the local coal companies and the Ministry of Health, while the most carefully analysed evidence went to the Board of Trade.

---

[1] Cf. Gateshead Corporation Bill, House of Lords Committee, Verbatim Report, March 22 to April 1, 1938.

A particularly good example is that of the Rhyl Urban District Council's proposal in 1932 to construct two reservoirs. When the Bill came before the House of Lords Committee the Ministry of Health submitted a report showing the financial effect of the scheme. The works were estimated to cost £140,000. This, in the opinion of the Ministry, would be too severe a burden on the ratepayers, since the rateable value was only £109,278, and the already existing debt outstanding was nearly five times this amount. (That on the water undertaking was already more than the rateable value.) The undertaking had been run at a loss in 1929–30 and 1930–31. The Ministry maintained that if the proposals were sanctioned, the loan charges would involve a very heavy increased charge to the consumer, and the rates. They submitted counter-proposals deferring more than one-half the works. The Council modified the scheme to meet the Ministry's suggestions. In the course of proceedings a number of expert witnesses gave evidence, including the Chief Engineer of the Liverpool Corporation Water Works.

Another interesting instance is related to the power of the Electricity Commissioners over extensions to electricity generating stations. On February 18, 1931, Fulham Borough Council obtained permission to proceed subject to the following conditions: (*a*) the work to be carried out in sections at such times as the Central Electricity Board shall prescribe, with the approval of the Electricity Commissioners; (*b*) the Council to submit to the Commissioners for their approval plans, drawings, specifications, designs of each section; (*c*) the Council not to work the station unless it installed the most efficient methods of reducing the nuisances of grit, smoke, sulphur, noise, and vibration, and the adequacy of these methods would be decided by the Electricity Commissioners, Commissioner of Works, and the Minister of Health, and these authorities would prescribe apparatus for the measurement of sulphur emission.

In other words, wild-cat schemes by wild-cat councillors cannot be established. Of course, there are occasional, but only very occasional, *bona fide* miscalculations of demand. When Manchester devised the gas plant at Partington, it was in the belief that demand would expand in the Trafford Park Estate between Partington and Stretford and that it would be called on to meet it. This calculation was not fulfilled for reasons discussed in the chapter on areas.[1] Again, Mossley before the slump of 1929 had hoped to supply gas on a large scale to the cotton factories. The slump killed the project. The great water scheme started in 1911 by Merthyr Tydfil involved the construction of the Taf Fechan reservoir, which, owing to conditions produced by the war, cost £1,534,000, though originally estimated at £400,000. Owing to world depression, a severe industrial decline set in and the population of the area diminished by 14·2 per cent between 1921 and 1934.

But there is always a review, as complete as human ingenuity and care can make it, of all the conditions of production and potential consumption, proven so far as they can possibly be by accurate and severe statistical analysis before the matter passes from the stage of enthusiasm to that of enterprise. Not only are Parliament and the departments concerned to get the benefit to the local community proven up to the hilt. The local authorities also have within themselves sufficient elements of opposition and tension, and sufficiently skilled officers whose own reputation is involved in the fate of an undertaking, to ensure the most rigorous weighing-up of the pros and cons. Even a small authority (18,368 in 1931) like Brownhill Urban District Council was prevented by its town meeting from seeking to acquire the local gas undertaking on the ground that people were leaving the district and the prospects of development did not justify the assumption of this new burden.[2] The political parties, the local Chambers of Commerce, the Ratepayers' Associations, the Employers' Federations, and the editor of the local newspaper (as Rostand has it, the "little great men in a circle small") give the Council no peace.

This is seen in our own day, particularly in regard to transport undertakings, where the abandonment of tramways involves, (*a*) the decision on abandonment, and (*b*) the choice between trolley-buses

[1] See pp. 254–55.

[2] *Municipal Review*, 1932, p. 60.

and motor-buses to replace them. It is well at this point to give an actual example of the kind of calculation undertaken. Mr. A. C. Baker, Transport Manager of Birmingham, has recorded the various considerations that arise in such a choice.[1] The trams' seating capacity was from sixty to eighty passengers; they were operating at the rate of one every six minutes; they cost no more than a bus or a trolley holding fifty passengers, including the upkeep of the permanent way and all charges, which include under the Tramways Act the maintenance of the road up to eighteen inches on each side of the outer rails; they paid in rates to the city £80,000 a year. If they were scrapped the rates would have to be found from another source; the cost of eighty miles of road would now fall wholly on the general rate fund; there would be extra damage to the roads by the new vehicles; it would be necessary to proceed to repay the outstanding capital; there would be a loss of a purchaser of about £200,000 worth of electricity per year from the city's electricity undertaking, and this might cause an increase of the price of current to other consumers. There is a careful consideration of the possible increase in the size of buses, of comparative costs, and a really imaginative attempt to weigh up consumers' relative feelings for trams, which have lost caste and for the fine shining buses and trolleys possessing the virtues of silence, odourlessness, and the "sweet riding" of a Rolls Royce.

One other practical example is apposite. In 1936 Bristol Corporation once again had its septennial opportunity to take over the tramways in its area. But the price proposed, though warrantable under the law permitting purchase, was too heavy, for though the Bristol Tramways and Carriage Company had been established before the War, it asked for valuation on the basis of complete replacement less depreciation *at post-War prices*. The Corporation was very anxious to get better service than the company was giving. The inferior service was, again, due partly to the imminence of the option. Further, to have bought the tramways only would have left the Corporation with the competition of the omnibuses already running. The Corporation therefore decided to negotiate a mixed ownership and management scheme. It would buy a half-share in the tramway undertaking, which would then establish an all-omnibus service in place of the trams. A division of all revenues between Corporation and Company was envisaged. The actual management would be in the hands of the Company. The scheme would cost the

---

[1] *Journal of the Institute of Transport*, March 1931.

Corporation £1,125,000 for its half-share and £235,800 for reconstruction.

Before proceeding with the Bill necessary to sanction this arrangement, the Corporation made a minute exploration of the alternatives open to them, and in particular, besides consulting eminent private experts, took counsel with the General Manager of the Birmingham Transport System, inspecting the cars, oil-driven buses, and trolley vehicles. The following factors were then weighed against each other. A trolley costs more than an omnibus, but the latter's running cost, with heavy oil, was considerably less. Yet the trolley is very silent and smooth-running and of larger seating capacity. Trolleys need trolley arms, overhead wires, and lines of posts. The wires are unsightly, especially in narrow streets and at junctions. Trolleys are route-bound; a motor omnibus can be readily transferred from one route or district to another to handle peak loads and for use on special occasions. One trolley cannot overtake another running in the same direction, a serious disability when duplicates are loading in rush hours. On the whole, the Committee decided on oil omnibuses.[1] One pool of interchangeable buses could be sent out into the country at week-ends. The mobility of the bus enabled it to negotiate roads obstructed by accidents or repairs.

Manchester laboured several years with the problem of replacing its tramways by motor-buses, and on some routes trolley-buses. In its decision it was guided by one of the foremost experts, its own Transport Manager, Mr. R. Stuart Pilcher.[2] The Report of the Transport Committee, submitted to the Council in September 1938, was passed on to the General and Parliamentary Committee on the casting vote of the Lord Mayor, so closely balanced were the financial and other advantages and disadvantages. On February 1, 1939, another Report, again narrowly accepted in Committee, was submitted to the Council and after three hours' debate approved by 54 to 35 votes. In the course of controversies surrounding the decision to use motor- rather than trolley-buses—the decision to abandon trams had been taken in 1937 in view of the heavy cost of renewals and road reconstruction—the coal and electricity interests had played a very active part, anxious to get consumers of their commodities. In summing up the submission of the Report to the Council the mover said: "We have examined the mobility of motor-buses and trolley-buses, the effect on traffic congestion, and the question of speed, cost, and mileage, and through-running between this and other authorities. We have also considered the effect on the coal industry, on our electricity undertaking, and the position of oil fuel in time of war. On that last point I want to suggest to you that it is not right that the people who use transport in Manchester should be expected every day in the week to pay more for that service because of a hypothetical war that may take place some years hence."[1]

---

[1] *Report of the Tramways Option Committee*, Bristol Corporation, July 1936, and *Western Daily Press and Bristol Mirror*, May 5 and May 25, 1937. It might be observed that at the Town's meeting held on May 24, 1937, only 400 were present, including 50 councillors.

[2] Cf. Report summarized in *Municipal Journal*, September 2 and 16, 1938. See also Mr. Pilcher's arguments in his work entitled *Road Passenger Transport*, 1937, chaps. vi–vii.

There is the reverse of the process of establishing undertakings, namely, their relinquishment, when it is believed that private enterprise can properly relieve the municipality. Local authorities are not so possessed with the mere idea of municipalization as to continue an enterprise however small the chance of success. Thus, Dover Council (with substantial Labour opposition) abandoned its trams in 1936 and yielded its transport powers to the East Kent Road Car Company. The Council stated:

> "The Council are advised that if they continue to operate the tramways, such large sums of money will have to be spent on renewals of track and rolling stock, that they will be involved in a considerable annual loss.
>
> They are also advised that if they themselves operate omibuses, they will probably only make a very small profit which may not be sufficient to cover contingencies, and further that the making of this profit would probably be contingent on their securing from the Traffic Commissioners, for their motor omnibus services, the same fare protection as is now given to the existing tramway services.
>
> The Council are therefore of opinion that, if satisfactory terms can be arranged, the best thing to do in the interests of the town is to enter into an agreement with the East Kent Road Car Co., Ltd., under which the Company would operate motor omnibuses for the Council within the Borough, and *provided satisfactory terms can be arranged*, they intend to do this."

Since 1919, about twenty local authorities have relinquished their gas undertakings. Time has depressed the expectations entertained by some councillors, and taught that if the consumers can be safeguarded by statutory and administrative control, then Councillors may as well let controlled private enterprise do the work. Thus, a few smallish authorities went into the hands of larger private undertakings: Ricksmansworth, Denton, Dukinfield, Knaresborough, Ashburton, Matlock. Hull was already half supplied by a private company. Wokingham was a very small undertaking surrounded by the Yorktown Gas Company's area, and sold to the latter with a surplus above its outstanding debt, enabling the Corporation to reduce the rates by 9d. in the pound. Mossley, which was sold to the Palatine Gas Company, had been an example of purely accidental miscalculation—for it was commenced before the Great Depression to serve cotton manufacture. Moreover, its topography necessitated heavy expenditure for levelling the site of the gas-works to rail level, and the taking down and moving of the railway bridge. The slump came; sales decreased; charges were raised; consumption fell still further. Its debt rose to £200,000. The undertaking was sold for about that. Holding companies are constantly making offers to buy municipal undertakings. Again, Southend in 1939 transferred the gas undertaking which it had operated since 1933, to the Gas Light and Coke Company. The Corporation found that it could not compete with the Company in terms of the price at which the latter agreed to supply, especially as more capital was needed to repair and improve the Corporation works.

---

[1] *Manchester Guardian*, February 2, 1939.

In 1938 Bury St. Edmunds Town Council sold its electricity undertaking to the East Anglia Company for £115,000. The East Anglia Company annually sells over 17½ million units; the Council nearly 3½ million units. The McGowan Committee required that any undertaking selling below 10 million units should be amalgamated on the grounds of economy. There was no chance of linking up with any other local authority owing to the geographical situation, while amalgamation with the Company was favoured geographically. The Council had to contemplate an increase in public lighting charges in any case, if it maintained its own system. The Company agreed to maintain the price as it was for twelve months.

Late in 1938 Shrewsbury transferred its electricity undertaking to the West Midland Joint Electricity Authority for roughly £110,000, which left the Shrewsbury Corporation better off to the extent of some £58,000 than if they had waited until legislation under the Government's proposal of 1937[1] materialize, when the valuations under compulsory sale will be very different from those used for voluntary transfer. Negotiations and visits to plant and calculations lasted some six months. Assets of generation and distribution, loss of rate aid, loss of income-tax set-off rights, loss of rateable value, the charges for public street lighting, exact economies in management, allowances for recent capital expenditure, stock on hand, disposition of reserve fund, had all to be examined with minuteness of arithmetic and carefulness of judgment. The Corporation had also to weigh up the possibility of change-over from D.C. to A.C.; the fact that its area of supply went only to the boundaries of the old borough and not to its suburbs though included in its recently extended area, its supply was about 5 million units a year, and had reason to contemplate the need to raise tariff. The Joint Authority were bound to a low tariff for a period of years. The Electricity Commissioners were consulted by both parties together before the negotiations were concluded, and their assent given. The documents show care, ability, and good sense.

---

[1] Cf. pp. 268–72 infra.

On the whole, whether in commencing or relinquishing an undertaking, local authorities show common sense; and before acting they invariably take the opinion on facts of well-known consulting technicians. In the last resort there is the central authority. In 1931 when the Luton Council was anxious to sell its tramways to the Eastern National Omnibus Co., Ltd., the Ministry of Transport refused consent as the *whole* of the undertaking was not being bought: for the trams, equipment, etc., were omitted, and the Company took no liability for making good the roads and removing the track.

Let it be noted that municipalities have relinquished undertakings, not because municipalities *as such* are less efficient than private enterprise, but because the latter can cover a larger area and achieve economies of scale. Thus, considerable care is exercised in forming a judgment. Nor should it be forgotten that in the case of the buses and tramways the Road Traffic Act of 1930 has given the Traffic Commissioners far-reaching powers of putting them in the framework of an economical system of transport in general. The foregoing opinions will be further exemplified in later chapters of this exposition.

Indeed, observers are usually inclined to the belief that not only are local authorities not precipitate in the inception of their schemes, but that on the contrary they are not enterprising enough. The Balfour Committee on Industry and Trade put forward such a view, though in quite a tentative form: "Where again a particular form of service tends to be superseded by an alternative form, it may be more difficult to realize the advantage of the change where the obsolescent service is in the hands of a local authority."[1] The Report does not specify the undertakings, but the comment would fit the abandonment of tramways in favour of trolley- and motor-buses. Yet this ought not to be put down exclusively to the timidity of local authorities, for as we show it is also due, perhaps predominantly due, to the legal freedom—up to the Road Traffic Act of 1930—of ordinary entrepreneurs to abandon tramways or start a motor-bus service, and the fact that Parliamentary Committees were more favourably inclined to private bus undertakings than municipal. The legal difficulties might make all the difference. It was a cry really wrung from the heart when Alderman Canby,[2] President of the Municipal Tramways and Transport Association, said: "We cannot even change from the system to another without incurring considerable expense in obtaining a local Act for the purpose. The greatest and oldest of Municipal Corporations as well as the youngest have been and are treated in this matter like children." Furthermore, there is the inertia that comes from foreseeing all the protracted negotiations involved in getting the co-operation of neighbouring local authorities with whom there are interrunning or other agreements.

However, there is indubitable evidence of inertia which unless consciously brought into daylight and mastered, is likely to slacken enterprise. Thus, when some fifteen years ago local tramway committees were warned that to meet motor-bus competition they must reduce the costs per vehicle-mile by increasing the speed of their cars, and that this meant altering from low- to high-power traction, they were in most cases deaf to the advice to raise the necessary funds, or proceeded too slowly for events. Only a few of the larger cities, including London, Glasgow and Edinburgh, acted as technology and changing circumstances required. This holds good, also of renewals of gas plant, which may become inefficient compared with more recently invented apparatus and may sometimes become dangerous,[3] and of the development of electricity undertakings.[4] In both cases, tramways and gas plant change will require a loan. For some time to come this will mean higher prices or a charge on the rates. Even where losses have been incurred and met out of rates, councillors have been unwilling to raise a loan. While any of the old debt is still outstanding, there is unwillingness to incur more. It could not have been easy for Yarmouth to change (December 1933) from trams to buses with interest and sinking fund still owing on the trams until 1946. If debt has been paid off, and charges in consequence reduced, there is again an unwillingness to borrow.

---

[1] Report, 1928, part ii, p. 40. [2] *Municipal Review*, December 1930, p. 78.

[3] Cf., e.g., the Southport case cited on p. 193 infra, n. 2.

[4] Cf. H. C. Lamb, *Electrical Engineer*, Manchester Presidential Address, I.M.E.A., June 5, 1939, p. 27. "The weakness of the system is the disinclination to take risks and the strong tendency to spend capital only on what has already become a proved success."

Why has this state of affairs occurred in some authorities? The nature of the local councillor's responsibility to the consumers is radically different from that of the private entrepreneur: the former is obsessed by the fear of failure, the latter takes chances, sometimes, as Professor Knight has suggested, too many chances.[1] The local councillor is not seeking his own fortune, so that there is no immediate incentive to take the leap at his own risk, or that of shareholders. The raising of a loan is always unpleasant news to most of the local electorate, and it requires a good deal of persuasion and temerity on the part of councillors to get it accepted. They may have to admit former failures and miscalculations and stand the public odium of doing so. Their incentive is a mixture of willingness to work for the public good, and popularity. They are therefore peculiarly dependent on the opinion of their clients. They feel they are risking what does not belong to them. Yet they are the stewards of property the obligations on which will continue to be payable by their fellow-citizens if their decision proves unfortunate. In a private company the obligations are limited by law, and extinguished by liquidation. Especially where a big undertaking must be transferred is it difficult to persuade oneself and the electorate that existing assets should be scrapped and bygones be bygones. Smaller undertakings, surrounded by modernized transport, or large gas and electricity concerns, have less psychological difficulty. It is no wonder that local councillors tend to put off the assumption of new obligations, and that in doing so they sometimes miss opportunities of acquiring an additional plant whose operation reduces costs even when the new loan charges and all the costs of discarding and paying for the old assets are included.[2] It is easy in such an atmosphere to minimize the satisfaction to consumers of amenities such as new kinds of vehicle for transport, higher pressure on the water supply, or gas which is less malodorous and so on.

---

[1] *Risk, Uncertainty and Profit*, pp. 366 ff.

[2] As, for example, in Wigan, which changed over from trams to trolley-buses in 1931. Loan debt survived till 1937 (£169,000). Yet by changing over, an average annual loss of £12,000 a year for the last nine years was converted into a loss of only £4,000 a year in the first two years after conversion, balanced accounts in 1933–34, and in 1938–39 an aid *to* rates of £5,000.

CALCULATION OF THE COST OF PRODUCTION

In the conduct of the enterprise, it is essential to know the cost of production, and, if possible, the extra cost involved in the assumption of the responsibility to supply each additional consumer. The possibility of calculating the cost of production with real indicative minuteness has been much discussed by the technical Press, by accountants, and frequently before Parliamentary Committees. As the cross-examination of Mr. Arthur Collins before the Joint Select Committee on Gas Prices[1] (which arose out of the price-policy of the South Metropolitan Gas Company) shows, the accountants and financial experts try hard to impute the various costs of production to the various groups of consumers. Before they propose a tariff they want to know what the service to consumers will cost the undertaking.

However skilled the analyst it is admitted that there is a margin of doubt. Prime costs can be estimated—though not with entire precision; overhead costs cannot be referred to particular units of sale, exactly.[2] Yet even if perfect precision is unattainable, the importance of attempting the precision is for two reasons acknowledged. It may settle the question of whether to accept a new consumer, to open up or abandon a particular tramway, bus, or trolley-bus route, to extend gas or electricity mains and wiring, to sink another well or extend a reservoir. It will contribute to a decision whether or not the cost shall be shared between the undertaking and the consumer, in the case of companies, and between ratepayers and consumers in the case of a local authority. In the case of local authority undertakings, it will offer guidance to settling the justice of the charges for distribution among the different groups of consumers. It does not, in practice, actually decide the matter, but it has considerable weight in the decision. It is essential to any separation of the economic element in the situation from the charitable, and from considerations of aesthetics or national defence.

---

[1] Cf. H.L. 24; 91; H.C. 110, 1937.

[2] Overhead costs are costs that cannot properly be attributed to the production of one particular commodity, or batch of commodities, which constitute only a fraction of the total production. A prime cost, on the other hand, is the cost which must be directly incurred to produce a particular commodity, and the term can perhaps be best defined by saying that it is a cost which would not be incurred if it was decided not to produce that particular commodity or batch of commodities. Some costs can be both "prime" and "overhead" costs. The coal or electricity used for running a train from London to Brighton is a prime cost for that train's journey, while in relation to the fare of any particular passenger on that train, it would certainly be an overhead cost. The train would have proceeded to Brighton irrespective of whether this particular passenger travelled by it.

Yet, however accurate the calculation and imputation of cost, the consumer can always face the producer with the final answer given by a not-so-dense working-class witness cross-examined by Counsel:[1]

> "You would agree, would you not, that you ought to pay a fair price for that which you get?—Yes.
>
> Because you have got, we will say, only 30s. a week, you would not expect a bootmaker to supply you with boots at half-price would you? —Quite so.
>
> And it would not be fair, would it, to expect the Electricity Company to supply you at a loss?—Nobody would supply anybody at a loss. It is not a business concern if he does. . . .
>
> You appreciate this, that if you did not pay a fair sum for that which you got, any loss on supplying you would have to be made up by other consumers? You appreciate that, Mr. Ponder, do you not?—Yes.
>
> In the summer it is a great convenience to you to be able to have gas, and to switch on when you want it?—Yes.
>
> A great convenience?—Yes.
>
> It is worth something to you, is it not?—It is worth as much as I can afford."

With very few exceptions, local authorities constantly watch their cost of production; they have their curves and tables, sometimes weekly, more often monthly. Thus, towards the end of 1935, Manchester calculated that it was impossible to establish twopenny maximum fares on the trams. For, owing to the geographical shape of the city, it would be an unequal charge on those who could only ride the shorter routes. But the Committee were willing to cut fares on some routes by a halfpenny, which would cost £9,444 per year. If the twopenny maximum fare were introduced, it would cost £65,000 a year, and to balance the loss would require an additional 7·6 million passengers at twopence each, *quia impossibile erat.*[2] Increasing prices of coal in 1938 and 1939 caused gas and electricity authorities to review their costs and charges for electricity returns. In Coventry it was decided to discontinue the "aggregation" of bills for the consumer with several premises which gave the benefit of sliding scale of charges for large consumption—this meant a yield of £5,000 more revenue to the City.

---

[1] Loc. cit., n. 1, p. 99, Questions, 856 ff.

[2] Cf. Craven, "Control of Transport Fares," Paper before M.T.T.A., June 1937, for a most interesting analysis of costs of the different routes in one city, emphasizing the importance of not taking *average* figures as an index to action, but of careful costing on each route.

Such calculation is general.[1] It is fostered by discussions at the various associations of local authorities,[2] and materially furthered, and, in part, required by the power of the central authorities to require returns or to lay down forms of accounts. It is impossible for the local authorities to carry out the regulations implied in the latter without informing themselves. The Institute of Municipal Treasurers and Accountants is a powerful and continuous influence for the good in this respect.

METHODS OF ACCOUNTING AND COSTING

Some of the accounts which the local authorities use are imposed by authority, and some are established by arrangement between the Institute of Municipal Treasurers and Accountants and the associations of local authorities. Attention was drawn to the subject of accounts by the Select Committee on Municipal Trading in 1903 and the Select Committee on the Accounts of Local Authorities, which reported in 1907.[3] The Board of Trade prescribes a form of accounts for electricity undertakings, and when the Electricity Commissioners took over the administration they continued the form, but with the intention shortly of adapting it to modern requirements. The Board of Trade has not prescribed a form of accounts for gas undertakings, but its two returns—namely, the return relating to gas undertakings, "*Part I: Particulars relating to the manufacture and supply of gas*," and "*Part II: Finance and Prices*,"—impose a minimum standard of accurate record. The Ministry of Transport requires a very detailed form of return annually for tramways and trolley-buses,[4] and as regards tramways the Municipal Tramways Association, together with the Institute of Municipal Treasurers and Accountants, drew up and adopted a standard form of accounts in January 1905, and this was followed in 1929 by a standard form of accounts for bus undertakings.[1] In regard to water undertakings there is no officially prescribed form, but the Ministry of Health requires substantial information in accordance with a prescribed form, and the general form of accounts proposed by the Select Committee is actually used by almost every local authority.[2]

---

[1] "I am under the impression," says Mr. Coxall, Borough Treasurer of Chesterfield, "that it is a fairly general practice to receive at the monthly meeetings of the trading committees unit costing sheets and reports from the executive officers." *Address, Conference I.M.T.A.*, 1937, p. 26.

[2] For example, The Municipal Tramways and Transport Association; the Institution of Gas Engineers; the Institute of Municipal Electrical Engineers; the British Waterworks Association.

[3] Select Committee Municipal Trading, B.P.P., 1903, vii, 270, pp. v–vi. S.P.P. Reports, 1907, xxxvii, cols. 3614 and 3615.

[4] *Tramways and Light Railways (Street and Road) and Trolley Vehicle Undertakings.*

These forms of accounts as established by the associations were evolved by highly experienced financial and technical experts. They are designed to elicit the truth not merely for the benefit of the public but also for the guidance of the administrators. It may be said that criticism of municipal undertakings on the ground that they do not subject their enterprises to the principles of valid accounting can only hold good of an extremely small number of insignificant undertakings.

There is as yet no universal and standardized method in operation, or even theoretically established, for indicating the progress of the undertakings by the method of unit costing. But certainly the subject has arrived at the point where the Institute of Municipal Treasurers and Accountants has been vested by its members with the duty of investigating the possibility of a general system. Numerous local authorities have already installed systems of costing. The places with costing schemes which have been outstanding in recent discussions are Rotherham,[3] Hull, Liverpool, Dundee, Harrow, Chesterfield, Workington, Manchester, Birmingham.

The theory of the advocates of costing reveals the nature of municipal enterprise, and offers safeguards against its potential weaknesses. Councillor Monkhouse, of Workington, who has for years urged upon various meetings the need for the institution of costing, says:[4]

> "The element of competition is lacking in public enterprise, and I would affirm that this lack is bound to influence the economics of public business, because the official is no more immune from the weaknesses of mankind than the rest of humanity. There must be substituted a standard of attainment, a time-table of effort and a comparison with the best that other municipalities can show—in other words, a uniform system of costing applicable to either large or small undertakings. The enormous spread of the science of costing in commercial under-

---

[1] October 1, 1929, *Municipal Motor-Omnibuses, Standard Form of Accounts.* Returns are also prescribed by the Traffic Commissioners for Buses.

[2] Returns are made to the British Waterworks Association and published in the *British Waterworks Directory.*

[3] Cf. *A Municipal Costing Scheme at Work,* by R. G. Nicholson, A.C.A., F.I.M.T.A., F.S.A.A., published by the Burroughs Adding Machine, Ltd.

[4] *The Function of Costing for Municipalities,* Conference of the Institute of Cost and Works Accountants, 1934.

> takings has come about because of absolute necessity, to meet the competition, in many cases of the whole world. It has been instituted by the directorates of these undertakings and the staffs had to respond and have responded in full measure to the demand."

This is, of course, important in proportion to the lack of competition, for then the usual fairly automatic external check and stimulus to effort and inventiveness have ceased to operate. Mr. Hadfield, C.B.E., M.Inst.C.E., former City Engineer of Sheffield, says:[1]

> "If the Municipal engineer is not subject to competition in the same form as a commercial firm, he is still judged by results, and it is satisfactory to know that in some respects the central government itself has instituted a system of comparison."

Two issues are involved in the development of the costing system. One is the question whether it shall be conducted centrally in the Treasurer's and Accountant's Department, or whether a cost accountant shall operate individually for each undertaking of the corporation. In Rotherham the system is centralized; in other places, like Birmingham and Manchester, it is decentralized. For the former it is argued that the Accountant is a specialist. For the latter it is claimed that there is a special expertness and a keenness of interest in the individual department which is directly interested and can know better than any outsider the exact connotation of the unit.

The second question is how far it is possible to achieve a system of costings comparative over the whole country, or even over local authorities of roughly the same character. The sceptical do not believe that one can either isolate the units themselves or find comparable local authorities. The enthusiasts argue that even if exact comparisons cannot be obtained, yet the establishment of an approximate uniform basis will enable comparisons to be made. Where contrasts are observed a process of questioning will begin, and this will cause an exclusion of the elements of a non-comparable nature, and at the very least provide a substantial warning to authorities which cannot answer for discrepancies. We ourselves think that the enthusiasts' attitude is the more valuable. It cannot be set aside as of no importance that such accounts would provide the trading committees of the Councils, as well as the whole Council, with material for cross-examination of officials. One of the great difficulties of public control over the operation of the trading departments is that elected councillors cannot gain a grip over the technicians unless they are provided with a simple method of doing so. The Institute of Municipal Treasurers and Accountants are in collaboration with the Institute of Cost and Works Accountants to discover national standards of costing.[1]

---

[1] *What I Expect from the Municipal Cost Accountant*, September 20, 1935.

Yet a note of warning is necessary. Costing for its own sake has no value: it is valuable only if it ministers directly or indirectly to the object of all enterprise—reduction of price to the consumer. It is to be hoped, therefore, that, on the tide of contemporary enthusiasm municipalities will not become searchers after expensive but uselessly precious cost analyses.

THE AUDIT OF ACCOUNTS

Not only has the central authority provided a framework of general law relating to accounts, and memoranda and regulations going into very considerable detail, but it has instituted for some authorities a yearly audit by their own auditors, and for certain authorities a system of audit exercised by central government auditors. The only local authorities with trading undertakings which come under the District Auditors of the Ministry of Health are those other than county and non-county boroughs. All boroughs are free of district audit unless they have voluntarily accepted it. In fact, about one hundred boroughs have accepted the benefits and obligations of district audit,[2] thirty under Section 239 of the Local Government Act, 1933, and the rest by Local Act, sometimes the one establishing the Corporation.

The distinction between boroughs and other authorities goes back to the Municipal Corporations Act of 1882, when the local authorities affected by that Act were compelled to establish an audit system. They were only required to provide three auditors, one appointed by the Mayor and two elected by the burgesses. Prior to this the reformers of 1835 had believed that to keep the accounts pure it was only necessary to have a democratically elected council. The corporations were too strong in Parliament in 1882 to be deprived entirely of their half-century of freedom. But the new system was very weak, for as Mr. Justice Farwell declared in *Attorney-General* v. *De Winton* (1906), they had no power to surcharge and their duty to make public any illegal payments by report to the council and burgesses was a duty of imperfect obligation which there was nothing to compel and very little to induce them to do.

---

[1] Some approach has already been made towards clarity, timeliness, accuracy, and comparability of accounts by The Accounts (Boroughs and Metropolitan Boroughs) Regulations, 1930, made by the Minister of Health (S.R.O., 1930, No. 30) with accompanying Memorandum, but it applies only to those authorities subject to District Audit.

[2] From lists furnished by the Minister of Health.

As we have already said, audit was the subject of searching examination by the Select Committees on Municipal Trading of 1900 and 1903. Those Committees revealed the farcical nature of the audit at that time; and showed that only in the places where local authorities (of course, the larger municipalities like Birmingham, Manchester, Liverpool, etc.) had acquired powers by private act to employ and pay professional auditors was the system tolerable, The Committee of 1903 therefore recommended that qualified auditors, being members of the Institute of Chartered Accountants or of the Incorporated Society of Accountants and Auditors, should be appointed by local authorities. This was to include urban districts and county councils, for district audit would be abolished for these. The new auditors would be appointed subject to the approval of the central authority, after hearing any objections from ratepayers. The auditor would hold office for a maximum of five years, would be eligible for reappointment and could not be dismissed without the sanction of the central authority. The Committee was of the opinion that statute or regulation ought to make it clear that the auditor's duty went further than mere certification of figures. He should have access to all the necessary documentary evidence, and power to require from officers information and explanations necessary for the performance of his duty. In regard to the trading undertakings, which of course were the special subject investigated by the Committee, it thought that the auditor should certify that every charge which the separate accounts of each trading undertaking ought to bear had been duly debited, that the accounts were a correct presentation of the transactions and results undertaken during the period, that due provision had been made out of revenue for loan repayment, that all its receipts and expenditure had been brought into account, and that all liabilities and assets had been fairly and accurately stated.

The auditors were to be required to express an opinion upon the necessity of reserve funds, of amounts set aside to meet depreciation and obsolescence of plants, in addition to the statutory sinking funds, and of the adequacy of such amounts. They would be required to present a report to the local authority including, besides special observations dictated by his judgment of the situation, strictures regarding the value of any assets taken into account. There would be forwarded to the central authority the detailed accounts and the auditor's report, and where an authority declined to carry out any recommendation made by the auditor he would report independently to the central authority.

The Committee excluded surcharge and disallowance, because it did not believe it possible to apply it to municipal corporations, "in view of the strong objection expressed by them." The system recommended was elaborate precisely because sanctions were excluded: procedures were multiplied as a substitute for penalties. It is not unreasonable to say that the system of central audit was rejected out of parochial vanity. The recommendations were not adopted by the Government.

In 1932 the Ray Committee on Local Government Expenditure[1] recommended that all accounts of municipal corporations should be audited by district auditors. The Municipal Corporations (Audit) Act of 1933 (now Section 239 of the Local Government Act of 1933) gives the power to the council of any borough to adopt a system of professional instead of elective audit, and it includes a list of professional bodies from which the auditors must be selected. Naturally the auditors are not subject to central government control, nor have they the powers of disallowance and surcharge.[2] At the present moment about one hundred Borough Councils are under District Audit, and the great majority of the remainder under professional audit, only some of the smaller boroughs remaining under elective audit.

We believe that universal audit by the central government should be established. This is the most certain safeguard of the interests of the consumer both as to economy and honesty. We do not think that the arguments (expressed in 1903 and since) that central government audit will cause capable but sensitive people to stay out of local government, or that anxiety about penalties will cause them to act too timidly, are substantial. It is true that many local authorities have gone far towards accounting in the manner the Committee of 1903 thought desirable. Others have been made to do so by the pressure, advice, and regulations of the central departments and the professional associations since the recommendations of the Committee on Local Accounts of 1909. We have no wish to detract from the quality of the professional auditors appointed by local authorities, nor their probity. We recognize also that outside, *official* auditors, as distinct from business-men auditors, might quibble over items which in a business concern should be spent without subjection to enterprise-killing routine. Yet every local authority should be above suspicion; the form and genuineness of its accounts should not be dependent upon personal accident or vagaries. The essence of an efficient audit is its externality, for only the external audit can be sufficiently objective. This does not mean that audit should be organized as present district audit.

---

[1] Cmd. 4200, 1932.

[2] Parliament now adopts a standard clause when dealing with the appointment of professional auditors of municipal accounts, making eligible members of societies or bodies other than the Institute of Chartered Accountants or the Incorporated Society of Accountants and Auditors.

The accounts of the authorities which come under district audit are reviewed every year by the staff of the audit division of the Ministry of Health. By the time they are in responsible positions they are a highly trained and competent body with a special knowledge of local government accounts and audit and considerable experience. No one can doubt the very great efficiency of the system. To appreciate that, without a full investigation of their actual work, one need only read the treatise written by one of the most distinguished of those auditors, Mr. A. Carson Roberts, entitled *A Treatise on Local Administration, and in particular on Finance and Accounts.* But investigation of the actual work shows the extent to which wrong accountancy, defalcations, and other malpractices are discovered, punished, and remedied. From the year 1928–29 to 1937–38 inclusive, fraud or irregularities caused the dismissal of 922 officers, or an average of ninety-two a year; the trading services accounted for forty-three in the whole period, but it must be remembered that it is only in a limited degree that the undertakings are audited. The Ministry of Health does not in its Annual Report distinguish between disallowances on rate-fund services and trading undertakings. But we are in a position to state that of the total *very few* irregularities occur in the municipal undertakings. It is true that the audit of the trading undertakings requires a somewhat special technique, difficult for the auditors to acquire, but nevertheless this is no barrier to their useful inquisition into the accounts. They tend in their reports to stop at what they regard as matters of policy, for example, the establishment of a tariff of charges, but they are fully interested in all matters of administration.

They call attention to the temptation to put off immediate provision for a deficit in the hope that next year's business will be better and produce a surplus.

> "Experience, however, has shown the need for meeting deficits out of rates as soon as they are ascertained and while they are still

> of manageable proportions; and indeed this course is not only that of prudence but that which, in the normal case, is required by law. The Minister has had occasion during the year to remind more than one Local Authority of this need and to insist that proper rate provisions shall be made."[1]

They are interested in the application of mechanical methods of accounting and are in a position to advise on the best practices already tested elsewhere.[2] They have detected the number of ways in which office machines may be falsified. They have discovered, and keep a watch for, the typical irregularities: for example, not tendering for supplies as the law requires, occasional bribery, defalcation, undue augmentation of travelling expenses coupled with too ambiguous an accounting for the items, such practices as the giving of free tram or bus passes to committee-men, or even all the councillors, and finally, a subject to be examined more carefully shortly, the allocation of central administrative charges to the debit of the trading accounts.

There are two other services which audit renders to the trading undertakings. One is the occasional enquiry into the causes for losses thereon, or the decline in profits. It is beneficial for the authority to have some external comment on this. Secondly, there are difficult questions of interpretation. For example, Section 48 of the Electricity Supply Act of 1926, contains the very unbusinesslike requirement that no more expenditure on the sale of lines, fittings, apparatus, and appliances shall be incurred than can be met by the income therefrom. The question arises whether the activities of a showroom not carrying on a retail trade, and therefore with only a small income from the sale of hire-purchase apparatus, are to be regarded as an independent venture showing a loss. Where there is no audit the authorities put a business-like interpretation on the section. Audit is valuable in cases of this kind because it raises the question both from the standpoint of accounting and of business common sense whether such a segregation is a sensible proceeding.[3]

---

[1] Cf. 18th Annual Report, Ministry of Health, p. 176.

[2] While the mechanical methods are a great help and saving to the authorities, they make the practice of audit much more difficult, as the auditor is obliged to learn a different code of references in each municipality before he can understand the accounts.

[3] As a matter of fact, continued misunderstanding of debits against showrooms caused an Advisory Committee to the Electricity Commissioners to report that "the cost of showrooms established wholly or principally to increase the sale of electricity and to promote its wider use must be met out of the revenue obtained from the sale of energy, and it is fallacious to refer to such cost as a loss in the

District audit, therefore, renders very valuable services to the local authorities and to the consumers. Its universal application would mean a very large increase in the audit staff. But if this were accomplished, it would be desirable to concentrate all governmental audit functions in one great Audit Department severed from the Executive, and to give it further powers of general report on efficiency and economy. This same Audit Department might be responsible also for the accounts of the Central Department and the Public Corporations in place of existing authorities. There ought also to be some amendment of the training of the auditors, in order to make more certain that though they remain sticklers for legality of practice, they shall exercise this in no unbusinesslike manner.

THE ALLOCATION OF CENTRAL ESTABLISHMENT CHARGES

It is impossible to arrive at an accurate estimate of the "success" of municipal undertakings unless they are debited with every charge for which their activities are responsible. This problem has worried the municipalities themselves, and much more the critics of municipal enterprise for two generations. It may be said that on the whole, but not universally, this matter has received a satisfactory solution in practice. The answers to the enquiries sent out by the Departmental Committee on the Accounts of Local Authorities (Report, 1907), showed a remarkable variety of practice and principle. The Committee concluded that

> "sufficient attention has not been paid to questions of this kind by local authorities. As regards establishment charges, for example, many authorities seem to have attempted no apportionment between the different departments, and in others there is reason to suppose that the allocation may have tended to favour one fund at the expense of another. It is plain that all these questions (and there are many others of a similar character) have an important bearing on the accuracy of the statement of profit and loss. It is equally plain that they are questions

supply undertaking or any trading done in the showroom, it being rather in the nature of expenditure on educational advertising, not only stimulating the further use of electricity, but also teaching the public how to get the best value for their expenditure on electricity. In the opinion of the Committee, the accounts of such trading in fittings, apparatus, wiring, etc., should be kept as distinct as practicable from the cost of the showroom viewed as an advertising and educational item only, and from the accounts relating to the sale of electricity." Cf. citation in *Municipal Journal*, October 28, 1938. In October 1938 the imperfect segregation of accounts by the Eastbourne Electricity Department aroused this same misunderstanding of the debit. Correction of the procedure reduced the original debt from £1,619 to £535.

> which cannot be dealt with adequately by general regulations; each case must be treated separately on its own merits and in accordance with the particular circumstances."

Since 1907 the practice of local authorities has vastly improved as a result of continued stimulation of the auditors, the Ministry of Health and the steady work of the Institute of Municipal Treasurers and Accountants. Mr. William C. Coxall, the Borough Treasurer of Chesterfield, who has been a pioneer in this as in other municipal accountancy questions, has reported the results of an enquiry which he made by questionnaire in 1925.[1] The answers from the sample of the twenty-three authorities from whom replies were received, showed a variety of practice involved in estimating the factors in the recurring phrase "according to services rendered." In some cases there appears to have been a general guess rather than a calculation; in other cases there is a calculation of time spent by the Town Clerk's department, and the Finance Department, on the special work of the trading undertakings, and the rent due by these is calculated most frequently on the building space occupied, and this includes charges for heating, lighting, and cleaning. Probably the matter has been worked out to the finest degree by Mr. Coxall himself, and the principles of it deserves reproduction.

In the Borough Treasurer's department, the officials are required to keep a daily record of the work performed by them upon what is known as a Weekly Unit Sheet. These sheets are initialled by superior officers. In order to obtain as near as practicable an exact allocation of the work done for the several trading undertakings, there is a further adaptation of this Unit Sheet to a definite system of costing. Each man has been given his price per hour in accordance with his salary, and at the end of the day has allocated the cost of his day's work to the fund for which he has worked. Similarly careful estimates are made by the Town Clerk's department for the salaries, rent, printing, stationery, postages applied to the use of the trading undertakings. So also in regard to the service of debt charges and the maintenance and depreciation of office machinery. A careful watch is kept on the working of this system, and the incidence of the costs charged to the trading undertakings, and every three years there is a review of their operation, and such alterations, if any, as are necessary are made on a report by the Borough Treasurer.[2]

---

[1] Lecture, *Costing and Allocation of Central Establishment Charges, Institute of Municipal Treasurers and Accountants, North Eastern Students.*

[2] Borough Treasurer's Report, prepared triennially.

We ourselves have made careful enquiries and have circularized seventy-nine local authorities which have both gas and electricity undertakings. The answers indicate that all the authorities are aware of the problem, that all of them make calculations of the portion of central costs owing by the trading undertakings; but there is a great variety in the methods of charging. Some charge by reference to the time spent, as is the Chesterfield practice; others take that proportion of the total income of the local authority to the individual income of each department. It may be accepted from this, and other evidence coming directly from men with long and extensive experience, that very few local authorities omit a proper charge for central establishment expenses. Indeed, the general tendency is to overcharge rather than undercharge the trading undertakings,[1] because this has two effects. It reduces the amount of expenditure falling on the rates, and it increases the set-off which the income tax authorities allow when they are assessing the income tax payable on the revenue of the trading undertakings under Schedule D.[2] One difficulty is how to divide up common expenses in the case of a composite undertaking like transport; and on this the Institute of Municipal Treasurers and Accountants and the Municipal Tramways and Transport Association have agreed that where there are tramways, motor omnibuses, and/or trolley omnibuses, they should be apportioned on the basis of the average number of vehicles in service, except where expenses can be directly charged to any one service.[3] It is perfectly clear that a degree of simplification has had to be accepted in the calculation of these central costs, for otherwise more would have been lost on their calculation than the subject was worth. One thing deserves remark at this point. If a portion of the rent of the Town Hall is charged against the undertakings, the latter may be charged with the value of an amenity to the town in general.[4] Some of the expense should be chargeable rather to town planning than to the undertakings.

---

[1] In spite of this tendency, avowed opponents still accuse local authorities of undercharging or not charging at all.

[2] The Inland Revenue and the Institute of Municipal Treasurers and Accountants have agreed on rules under which the charge made in the revenue accounts is only accepted where it can be proved, on challenge, to be reasonable.

[3] *Standard Form of Accounts*, 1929, p. 9.

[4] This holds good of tramway and bus shelters also.

Chapter Six

THE PURCHASE OF SUPPLIES, LAND AND UNDERTAKINGS

ON the whole the arrangements made by statutes, Orders, and administrative practice are such that municipal trading undertakings choose their materials and equipment adequately for their purposes and do not pay undue sums for them. As to quality and price, their management appears to be not inferior to the best private firms, whether running public utilities or not. Let us survey the legal foundations and the practical problems of this factor of production.

The first question is that of price, which takes with it an estimate of quality and suitability. The Local Government Act of 1933 requires that all contracts made by local authorities shall be made in accordance with their Standing Orders. It requires that, except as provided in the Standing Orders of the authority, notices of the intention of the authority or its committee to enter into contracts for supplies of goods and material must be published and tenders invited. Further, Standing Orders must regulate the manner in which such a notice shall be published. (Section 266.) In 1934 Circular 1388 of the Ministry of Health established Model Standing Orders for this purpose. These require that all contracts must comply with the Standing Orders unless exceptions are provided by the Council; and exceptions made by a Committee must be specially reported to the Council and expressly noted in the minutes. Before entering into a contract for the execution of any work, the Council must obtain an estimate in writing of the initial cost and the annual charge. According to the size of the local authority, contracts for the supply of goods or the execution of work above varying amounts must be given a varying number of days' public notice inviting tenders; and where the contract is above more substantial (but varying) amounts, notice must also appear in the trade journals.

Where a contract is above a certain sum in value, it must be written, specifying price and the time for fulfilment. Contracts exceeding certain sums must specify monetary penalties for default. These written contracts must provide for cancellation in the case of bribery and for recovery of any loss from the contractor. Tenders must be forwarded to the Clerk in plain envelopes; they must be retained by him until the time appointed for their opening, and they must be opened in the presence of the appropriate members of the Council and an officer specially designated by the Clerk. Tenders other than the lowest are not to be accepted save on a written report from the appropriate officer.

Insistence upon tenders does not mean that the lowest tender must always be accepted without regard to any other factors. The Minister of Health has declared that questions of efficiency and running cost, the durability of materials, freedom from the necessity for repair and attention, suitability for the purpose in view, and the technical qualifications and financial standing of the contractor, must be considered in addition to tendered price.[1] The Minister is also opposed to "rise-and-fall" contracts, on the grounds that these diminish the need for economy and efficient administration on the part of the contractor, thus throwing an extra burden on the local authority.[2]

The Standing Orders of local authorities are now in the course of amendment to attain the standard thus set.

A survey[3] made in 1936 by Dr. A. H. Marshall, Deputy City Treasurer of Coventry, shows that the requirement of an estimate in writing of the probable cost has been adopted fairly generally by small authorities. But the largest have omitted it altogether or have applied it only to large sums, for example to contracts over £500 or over £1,000. Few have made a distinction between the limits for initial cost and limits for maintenance. A certain inertia obstructs the requirement of such written reports, due perhaps in the large authorities to the wish to reduce the number of documents which must be put before the already heavily burdened councillors. Advertisement for tenders was established generations ago in local government law, and is universally practised. But the limit of £1,000, suggested by the Ministry, for advertisement in trade journals, is generally regarded among the responsible officers as too low, except for small authorities. Some large authorities have adopted a limit of £5,000. For local advertisements the limit is frequently as high as £1,000. Only a few authorities have adopted the proposals that contracts of over £50 should be in writing; although one very large authority provides that *every* contract shall be in writing, a practice which is to be commended for its encouragement of probity, though it certainly involves much clerical routine. One moderate-sized authority requires that contracts in excess of £200 shall be in writing; and that when the value is above £500 the contract shall not merely be embodied in correspondence but shall be under seal. There is much to be said for the general adoption of such an arrangement.

---

[1] House of Commons, July 28, 1936. [2] Ibid., February 15, 1937.

[3] *Local Authorities: Internal Financial Control*, pp. 100 ff.

The Ministry suggests that where some other than the lowest tender is accepted it shall be only on the written report of an officer. Few authorities include this principle in their orders. There are cases where an officer is ready to advise a Committee verbally against a tender, but not anxious to state his views in writing. It may be necessary for him to make allegations about "rings," or qualities, or the character of the contractor. On the other hand, verbal reports, even when subjected to cross-examination, lack precision, and often give an impression which may affect a decision but cannot be clearly defined in the minutes.

There is, of course, considerable dispute regarding the value of tendering. Technical officers are in a position to know exactly which firms produce the only kind of material or equipment for the authority's special requirements. The public tender can only result in deliveries being made by these firms. Therefore it is a waste of time and labour to proceed by tender. Many of the officers are able to testify that a tender would only have resulted in the offer of supplies at a price higher than that obtainable by private negotiation with selected firms. In order to overcome unnecessary routine, many local authorities permit competitive tenders only from firms selected by the Committee or the Council itself, often after public invitation to apply for inclusion.

The advertisement procedure descends from the time when reliance was placed upon the marriage of democratic principles and capitalist competition. But the postulates are no longer satisfied by the few great firms who make meters, cables, cast-iron pipes, hydrants, switch-gear, coal-pulverizers and the rest, and therefore the trading departments manage to secure a large part of their supplies without public tender. This procedure is made the safer by the delegation to committees of the right to incur expenditure up to a certain amount, for example, £100 or £500 per item. However, as Mr. J. Brockis, the Manager of the County Supplies Department of the West Riding said, advertisement is the best system devised for dealing with moneys from the public purse, as it frees the authority from suspicion of contracts to friends. A careful enquiry is made into the repute, the technical capacity, the financial strength of firms putting in tenders, and sometimes monetary guarantees are required.[1]

Over and above all this there is a control of the arithmetical and formal side of the contract by the Treasurer's department, and a general surveillance by that department of such variations in the estimates as have financial consequences. On the whole, it can be said that actual contracting methods are sound. The occasional mistakes and direct dishonesty seem to be of very small moment: indeed they are negligible as a fraction of the total purchases. Some of the unfair preferences are less a damage to the authority and the consumers than a loss to a competitor who can do just as well as the man who is actually awarded the contract.

Within the rules, however, the Committee and Council are still dependent on the honesty and wisdom of the manager. He might, for example, argue that the goods tendered for are not identical, and propose the acceptance of a tender above the lowest. Or he may overstock. It is difficult in the extreme for the councillors to detect unsound or dishonest advice. Careful recruitment and constant vigilance are the minimum safeguards.

PRICE RINGS AND MARKETING SCHEMES

Several local authorities have complained of the existence of "price-rings, trusts, and combines." Tenders for very large and complicated orders have come, with fastidious prudery, within a few shillings of each other. It has been proved that:

> "the prices of many commodities used are in fact regulated by associations of manufacturers and merchants, and in many instances competitive tendering for the supply of such commodities no longer obtains, in that the quotations received are all alike. In other, but fewer, instances where price-regulating operates, the markets are not entirely controlled and there is variation in the quoted prices. Generally the formation of a price-regulating association in respect of a particular article has been followed by an increased charge for that article. The rate of such increase varies considerably, and it is difficult to determine how far those increases are properly attributable to increases in the cost of labour and raw materials, or whether the previous price had been forced down by intensive competition to a level which did not yield a fair return to the producer or merchant."[2]

---

[1] Cf. *Municipal Journal*, March 29, 1935, pp. 521–22. Establishment and Management of a Central Stores.

[2] Report General Purposes Committee, April 6, 1937, pp. 12 and 13.

The Birmingham Corporation Committee, reporting on this matter, exonerated firms supplying *general* commodities from charging unreasonably increased prices which could be attributed "directly and wholly to the formation of a price association." Yet it was able, nevertheless, in the matter of a contract for steel, after an interview with the suppliers and an examination of basic prices, to obtain deliveries at nearly £2 per ton lower than the original quotations. The Committee therefore proposed in future to negotiate similar contracts through the City Surveyor. Nor was it satisfied with the quotations for coal, although this was marketed subject to the Coal Mines Act of 1930. The General Purposes Committee of the City of Birmingham therefore proposed to make an exception to the rule of public notice for contracts exceeding £500 in order to be freer to negotiate prices.

Furthermore, the Committee thought that price rings could be combated by a temporary cessation of favouritism for home producers. Local authorities very often favour, by their Standing Orders, home against foreign contractors, especially where some of the articles are made in the neighbourhood, although the price is a little disadvantageous.[1]

In 1928 the City of Edinburgh was involved in a controversy with the British Electrical and Allied Manufacturers' Association, the latter alleging that Edinburgh had suffered a loss of some £200,000 by buying electrical plant from Switzerland. It appears that the Manufacturers' Association had founded their conclusion on erroneous assumptions and comparisons. It was proved by the City that the turbines bought from Switzerland compared favourably with the efficiency of the average of British orders, and were 35 per cent cheaper than all-British plant. The Manufacturers' Association withdrew their statements from publication.

Leicester City Council, in 1928, placed a contract for £413,000 for electrical equipment with a British firm. At the end of 1926 the difference between the cost of a Swiss turbine and its English equivalent was 69 per cent: or, to compare capital and maintenance costs, the Swiss production was £2 5s. 6d. per kilowatt, against £3 6s. for the best English offer. The City Council made it clear that they were prepared to buy abroad unless they could obtain better terms for their consumers. As a result an English firm was able to offer plant working at a cost of £1 18s. 6d. per kilowatt![1]

---

[1] It has happened that an order for chairs was about to be given to a local firm when it was discovered that the firm was not manufacturing in the vicinity, but buying from manufacturers who had already tendered, naturally, at a lower price!

If we can judge by the action of the Ministry of Health in the matter of a loan for the erection of central schools in Carlisle (1937), the Departments are not favourably disposed towards the acceptance of tenders above the lowest on the score that local labour would be employed. It was observed by the Minister of Health that contractors usually employ as much local labour as possible.

These examples (chosen from many) have been given not simply to show gains and losses but to observe that local authorities are not prepared to place contracts without a very careful survey of the sources of supply of qualities of equipment and of price.

One example of control of prices which affects company undertakings as well as local authorities is the advent of the Coal Marketing Schemes. Neither municipal nor company undertakings are any longer free to bargain about price and quality schemes under the Coal Mines Acts of 1930 and 1937 for the undertakings to buy at a "contrived" price. The West Midland Joint Electricity Authority complains (14th Annual Report, December 1938) of the rise in price—from 13s. 11d. per ton in 1937 to 17s. 0¼d. in 1938.

Local authorities have not the incentive of private profit to drive them to challenge manufacturers' pretensions, but there are motives which in this context are at least equal to its force: namely, a sense of public welfare, dignity, and responsibility for what is due to the public. They have technicians who are interested in reducing the costs of production of their commodity to its barest minimum.[2] Associations of Local Authorities from time to time confer with the official representatives of commerce and manufactures (e.g. the F.B.I.) to establish rules for the making and observance of contracts.

Naturally, local authorities must be greatly vigilant to see that raw materials (coal, for example) which play such a large part in the cost of production of gas and electricity are of correct quality and weight.[3] Some typical possibilities of mistake are to be found in three cases of fairly recent occurrence: the Poplar Case, the Nottingham Gas Frauds, and one other case in which the tare weight of trucks was apparently wrongly stated.

In the Poplar Case, 1933,[4] the Council noticed that the Electricity

---

[1] *Municipal Journal*, May 4, 1928.

[2] Not that, of course, private enterprise is less rich in technical assistance.

[3] For example, consumption of coal each year for gas manufacture, random samples in 1937–38, in tons:

Birmingham	947,236	Wigan	46,189
Ashford	9,121	Nelson	22,610
Salford	115,309	Keighley	31,523
Stoke	83,052		

[4] Cf. *Local Government Finance*, May 1937.

Department was not receiving coal of the quality specified in the contracts, though it was good and suitable. An extraordinary audit was conducted by the District Auditor at the Council's request. As a result the contractor was sued for obtaining sums of money with intent to defraud, but found not guilty. Other proceedings claiming damages were taken against eight contractors, and in seven cases repayments were made amounting to nearly £24,000.

This case illustrates the necessity for the regular testing of the quality of materials supplied. Among the larger authorities a laboratory is usually maintained, and all goods, oils, paints, fuels, etc., are tested on delivery. Some of the larger and many of the smaller authorities find it cheaper to send samples to the National Physical Laboratory. Many with long experience of local government practice state that local authorities are usually slack about testing qualities; but, on the other hand, people with as wide experience insist that there is vigilant sampling, sometimes too much. In some cases the heads of departments or their representatives go to the source of supply and make sure that the qualities are actually being packed.

The Nottingham case was an example of faulty arrangements for the checking of the deliveries of stock in the Gas Department. Coal, timber, and other materials were declared delivered, according to the recipient's books to the stores of the Gas Department. There was no adequate checking of the store-keeper's account. For something like ten years the chief clerk of the Requisitions Department had conspired with certain people (a merchant, an ironmonger, a builder, a timber merchant, two master plumbers, etc.) to receive and acknowledge invoices, which were then passed on for payment, goods being delivered under quantity, or not delivered at all. The fraudulent invoices went unchecked, as there was no stock account which would have been subject to periodic audit by the Gas Accountant. The Council were presented with a total for all the business of the Corporation of some 30,000 to 40,000 invoices per month; hence the need, which had not in fact been met, of an early check on each Department's records. Too much trust had also been reposed in the chief clerk of the Requisitions Department: it was stated in evidence that a superior official who should have supervised him had faith in him as "his favourite son." About £66,000 were lost before the discovery was made.[1] A firm of auditors who overhauled the accountancy arrangements rightly attributed administrative responsibility to the Gas Committee, the Accounts Sub-Committee, the City Treasurer, the General Manager of the Gas Department, and the Gas Accountant. The line of responsibility had been drawn in 1920 when the latter had been given primary responsibility. His technical training and experience were the first line of defence: the others in the hierarchy up to the Gas Committee followed.

---

[1] Cf. *The Times*, November 1930 and February 17–28, March 2, 3, and 4, 1931; April 14 and 29, 1931.

Finally,[1] as the result of the discovery of large discrepancies between colliery weights and those checked at the weighbridge, some being above and others below, a careful investigation was made of the tare in a test case. Two thousand waggons were weighed. The tare was given correctly in 10 per cent of the cases: in another 10 per cent of the cases the tare was actually lighter than the weight stated, but only by one hundredweight; in 80 per cent of the cases the waggons were heavier than the tares by from one to fourteen hundredweights. It was calculated that from March to October 1936, when the waggons were received, the local authority had been overcharged for 405 tons of coal, worth £308. The importance therefore of verification of quantities is fully established. The younger recruits to the municipal service have learned these lessons as part of their studies and training under modern conditions.

As regards actual equipment—for example, trams, buses, trolleybuses, generating plant—it is extremely difficult for the local authority to make a mistake. The plethora of trade and technical journals, their advertisements and technical articles, render it practically impossible for even the sleepiest manager in the sleepiest urban district to avoid noticing what in fact is the best equipment in relation to price. There is a close and constant connection between the associations of municipal undertakings and the associations of manufacturers and contractors, to enable the former to influence the types, grades, forms, and prices of apparatus. Further, equipment is often designed especially to suit the circumstances of the particular locality. For example, Leeds is a town with very sharp corners on the roads, and therefore it is essential to design smallish trams, four-wheeled and with a swing-link truck; and the trams being small there is all the more need for speedy loading and unloading by staircase on the near side of the body. Such trams have been designed by Leeds' own transport manager. Indeed, the whole question of transport design in the matter of loading and unloading and general comfort owes a great deal to municipal inventiveness, and there is a considerable variety of models to suit the particular localities.

---

[1] Cf. *Local Government Finance*, February 1937, p. 50.

Sheffield, where the trams have to negotiate steep hills, has had to design vehicles with especially powerful brakes and motors; and both of these needs, it may be added, necessarily put up the cost. Again, in July 1937, Glasgow Corporation decided to experiment with a hybrid type of vehicle—a petrol trolley-bus. It is thought that this will meet the special conditions of the city as the cost and inconvenience of the poles and wires will be avoided in the centre of the town by the use of the petrol engine, while the trolley apparatus can be used with less disadvantages in the suburbs.

Some local authorities are even inventors of certain fuels. For example, important experiments have recently been conducted by various local authorities to find a new fuel for buses. Creosote oil fuel has been tried by Salford. Chesterfield first, and more recently Birmingham and Rotherham have tried compressed gas. In 1936 Wallasey commenced experiments with double-decker buses using bottled gas. On the same route there was an alternative use of petrol and gas. Edinburgh, with very hilly ground and winding streets, suffers more than most places from tram-track wear, and therefore conducts experiments with specially hard rails, alloy steels, and deeper grooves.

Moreover, when a scheme is substantial the local authority calls in a consultant specialist. Often firms supply experimental plant or vehicles on approval. Such competition as there is among firms for municipal orders, tends to keep up the standard of the firm's adaptability. The central authority, when responsible for sanctioning schemes, especially in connection with loans, submits the proposed equipment to its own technical experts. There is, of course, the possibility that a new piece of apparatus may not prove the contentions of its inventor, as in the case of the early electricity plant, trolley-buses, etc. Bury Corporation, for example, tried central entrance vehicles, and rear entrance and front exit also, but found the additional costs of the latter for repairs too great—the former was also too expensive. But the mistakes do not amount to a great deal. In any case the loss is part of the price which the whole of society has to pay for invention.

When expensive equipment is being bought, the technical officer is usually accompanied by the Chairman of the Committee of the trading undertaking, and sometimes by the Committee itself. The essential judgment, of course, can only be made by the technical officer. But there are things in the matter of design, colour, and amenity upon which it is beneficial to have the opinion of the consumers' representatives. Critics sometimes allege that committee-men are ignorant and that their judgment is upset by being feasted. But they do not judge of recondite technical features. The feast—if there is one—can make only a negligible, if any difference, for the manager wishes to purchase the equipment which cuts down his cost, to make a success of his enterprise. Committee-men wish the same. There is still debate in Council in the final resort before the contract is settled; and ratepayers, either individually or in associations, are vigilant for corruption or stupidity.

CENTRAL PURCHASING

Of recent years local authorities, especially the very largest, have awakened to the economy and the saving of time and labour to be derived from purchasing articles common to a number of departments centrally. Until 1934, development was not directed by the central departments excepting occasionally and piecemeal, although it has always been their desire to foster economy through central purchasing. In 1931 Arthur Greenwood, then Minister of Health, set going a movement which may have very far-reaching effects. Its results so far are the First and Second Reports of the Committee on the Standardization and Simplification of the Requirements of Local Authorities.[1] The Committee consisted of representatives of the various associations of local government authorities, and a secretary supplied by the Ministry of Health. It enquired into (*a*) the possibility of standardizing various goods—that is, producing a standard unit incorporating the best points of all available types (and for this it was necessary to get assurances from British manufacturers): (*b*) the possibility of simplifying, that is, adopting the type or types most generally used: (*c*) the extent to which this was already being done by local authorities; (*d*) the possibility and methods of extending existing practices and improving them.

It was observed that many local authorities were already centralizing their purchases of materials and supplies, the largest and most elaborate scheme being that of the London County Council, while there were schemes of great importance in Kent, the West Riding, Birmingham, Bootle, Burnley, Liverpool, Manchester, Newcastle-on-Tyne, Newport (Mon.), Portsmouth, St. Helens, Salford, Southport, and Wallasey. The Committee shows by numerous examples how simple it is to reduce the *unnecessary* varieties of supplies common to various departments. Why should a Council allow its various departments capriciously to order no fewer than forty different varieties of soap, or fuels, or textiles, or cleaning materials, or stationery and office requisites, or electric bulbs, or uniforms, or ironmongery, or gas-mantles, or paints? The Committee explained that the advantages.of simplification were the savings by elimination of unnecessary duplication and therefore the possibility of buying goods in bulk at a reduced price. Time is saved, where only one contract is made for each class of goods, in the preparation of contracts and the checking of accounts. One item reported by the Committee illustrates the possibility of great savings. "County borough; envelopes; by standardizing and by purchasing in bulk a saving of 42·5 per cent was effected. Another county borough estimated a saving of £2,000 a year by standardizing its stationery."

---

[1] Ministry of Health, 1934 and 1935.

There are two methods in existence among local authorities for achieving these purposes. One is exemplified in the practice of Manchester,[1] where the largest buying department buys for all the rest, and the other is exemplified in Birmingham,[2] where there is a separate Central Supplies Department. In each of this type of centralization a committee of chief officials must prepare and periodically revise the list of those things which shall be centrally purchased. Great economies cannot be obtained by the small municipalities, and therefore the Committee urge that they co-operate with their neighbours or obtain specifications prepared by the County Council and arrange for the supply of their needs on those specifications.

It might be noticed that the central authority urges local authorities to proceed quickly with standardization and simplification "as trustees for their ratepayers, but . . . equally integral portions of the Body Politic, and more than local advantage is involved. It is scarcely recognized by the public, and we are not sure that local authorities themselves have fully recognized, how large is the market which they influence."[3]

THE PURCHASE OF LAND

Two other questions must be briefly reviewed in this section. The general statutes permitting the establishment of an undertaking recognize that land will be required, and therefore arrange for purchase by agreement. Moreover, since a local authority requires for its undertaking not land in general but a particular piece of land best situated to serve the purpose of the undertaking, provisions have been made for compulsory acquisition. Where the land to be acquired involves a loan, the central department makes a thorough investigation into the price agreed upon by the bargainers on both sides, and normally demands an independent valuation by the District Valuer,[1] who is an official both independent and specially skilled in valuation.

---

[1] Cf. Page, *Planning and Co-ordination in Local Authorities*, 1935.

[2] Cf. for a direct description *Public Administration*, October 1936, pp. 388 ff. *Central Purchasing Schemes in Operation*, by S. C. Bird, Deputy Officer-in-Charge, Central Purchasing Department, Birmingham Corporation.

[3] Op. cit., p. 9.

In the matter of land bought by negotiation two questions arise. One is the possibility—as is sometimes alleged, the probability—that there will be unfair speculation by those who learn of the council's plans from friends on the council. Secondly, there is the general possibility that when the intention of the council is made public, sellers will regard this as their opportunity of making a good profit. As regards the first, the law has attempted to exclude it by setting up the rule[2] that a member of a local authority having a pecuniary interest, direct or indirect, in any contract or proposed contract or other matter shall disclose the fact at the meeting, and shall not take part in the consideration or discussion of or voting on any question with respect to the contract or other matter. This stipulation is valuable, but, of course, it relates to a direct interest. It does not prevent disclosures to friends. Nor does it prevent a timely purchase of land which may be deemed by many to be a miracle of foresight; for then the councillor may even absent himself from the decisive meeting and still wake up to the pleasure of finding that his foresight has been fully justified. In fact, from time to time there have been unfair speculations of this kind, but it may at once be said that they are few and far between, and compared with the mass of expenditure on local government undertakings indeed small. A former Lord Mayor of Hull, who exercised a remarkable and duly rewarded prescience while Chairman of the Housing Committee, was far from being a millionaire when he committed suicide. It is a fact that those with land to sell to the local authorities think that they have the right to expect more substantial profits than when they deal with private business men.

---

[1] Cf. Ministry of Health, Circular 1665, December 1937. Acquisition of Land. Assistance of District Valuers. The Ministry confines its attention in this contest to land over £1,000 in value, or where the purpose for which the land is purchased is grant aided.

[2] Local Government Act, 1933, Section 76, following upon and amending Section 12 of the Municipal Corporations Act of 1882 and Section 46 of the Local Government Act of 1894.

To circumvent this possibility, local authorities adopt special devices. Some delegate the power to purchase to an official, and record the matter on their private minutes only. Another device was adopted by the Birmingham Corporation; Section 4 of their Act of 1919 gave them the right to buy land by agreement although it was not immediately required, and, in order to pay the necessary deposit, to borrow money temporarily from their bankers. Since then the power has been extended to many local authorities,[1] and the Local Government Act of 1933 gave this power generally to all local authorities other than parishes with the consent and subject to the conditions imposed by the Minister of that department concerned with that purpose.[2]

The practice of central control, the employment of the District Valuer, and of well-known negotiators who have a reputation to maintain in the field of local government consulting practice (a field haunted by swiftly circulating gossip) combine to make improbable any loss to the local authority by reason of over-payment for the land it requires.

Local authorities have by the public statutes relating to gas, water, electricity, and tramways the power to buy land compulsorily. They must fulfil an elaborate procedure designed to secure that the compensation shall be fair as between buyer and seller. To this end notice is given to the owners describing the land, stating the purpose for which it is designed and that the local authority intends to ask the Minister for an order empowering them to purchase compulsorily.

---

[1] It serves to show the care taken by Parliament in its grant of powers in which trading (as well as other branches of municipal administration) is concerned to relate the experience of Chesterfield. Chesterfield was the first smaller authority to acquire these important clauses whereby land can be purchased twelve months in advance without going to the Ministry. They were granted only after very high commendation from the Local Legislation Committee of the Council's administration as represented by leading members of the Improvement Committee in the witness box at the Committee hearing. The Chairman of the Local Legislation Committee, Sir Thomas Robinson, stated: "The Committee have considered the matter and we have consented to give the clause. But I make this remark, that I think this clause could be very well worked by a private conversation with the Ministry before moving. The door is always open and you can see them at any time, and I think if there is more confidence between the Ministry of Health and the Corporation, or sufficient confidence, I think you would meet both the difficulties of the Ministry and the views of the Corporation by a private conversation before moving relative to these things. I would like to see a clause of that sort drafted. But the Committee feel that Chesterfield has a good future before it and it is wisely governed, we think, and that you are men of common sense and that we can trust the Chesterfield Corporation with the clause. But we do just make that remark."

[2] Section 157.

A time is stated within which objections can be lodged. If no objection is lodged the Minister may make an order authorizing the purchase, but if there are objections, and these are not withdrawn, a local enquiry is held.[1] If agreement cannot be reached, then the question of the compensation is submitted to a tribunal composed of arbitrators appointed by a Reference Committee consisting of the Lord Chief Justice, the Master of the Rolls and the President of the Surveyor's Institute.[2] Proceedings before the arbitrator are public, and his decision as to fact is final, but matters of law may be stated to the High Court. The actual assessment of compensation is determined on principles established in the Acquisition of Land Act of 1919. Broadly speaking, the principle is to ascertain the fair value of the land to the owner at the date of notice to treat: the amount which the land, if sold in open market by a willing seller, might be expected to realize. The fundamental considerations are what the vendor loses by being deprived of the land and not what the buyer gains from its acquisition. Prospective value may be taken into account, from the vendor's point of view, but not by reason of any increase in value to be produced by the use to which the local authority will put it, or where its special use has been retained through statutory power, or where it arises only from the special needs of a particular purchaser. The local authority must pay also for consequential losses, such as the need of removal, losses in respect of fixtures, and decline in the value of the goodwill of a business on the premises taken. Where the land has not been used for purposes of profit the principle adopted in assessing the compensation is that of reinstatement. No allowance is made because acquisition is compulsory. Thus local authorities are simultaneously safeguarded by this power of eminent domain from being held up to ransom and from getting their lands at a less than reasonable price.

Finally, where company undertakings are bought out, the terms of purchase are settled by the statute which permits the option of purchase. In the case of tramways (for some years past a rare happening) the Tramways Act of 1870 permitted only a valuation of material, that is to say with nothing for goodwill, nothing from a computation of future earnings or "other consideration whatsoever"; it was merely, as Section 43 says, the "then" value of the tramways, and all lands, buildings, works, materials, and plant of the promoters suitable to be used by them for the purposes of the undertaking.[1] But to revert to the earlier example of Bristol transport, how very difficult it is to determine[2] the "then" value can be imagined from the fact that the total amount involved was £1,125,000, while opponents of the scheme alleged that the trams were merely "scrap iron." In Will's interpretation, however, which follows legal decisions and practice, the difficulty of the calculation begins to become apparent.

---

[1] This procedure is regulated by the Lands Clauses Consolidation Act of 1845 (8 & 9 Vict., c. 18), Lands Clauses Consolidation Acts Amendment Act, 1860 (23–24 Vict., c. 106), Lands Clauses Consolidation Act, 1869 (32 & 33 Vict., c. 18), Lands Clauses (Umpire) Act, 1883 (46 & 47 Vict., c. 15), Lands Clauses (Taxation of Costs) Act, 1895 (58 Vict., c. 11).

[2] Acquisition of Land (Assessment of Compensation) Act, 1919 (9 & 10 Geo. V, c. 57), s. 1 (4).

> "The 'then' value is such a sum as it would cost to construct and establish the tramways, deducting a proper sum in respect of depreciation to their present condition, but taking into account the fact that the tramways are successfully constructed and in complete working condition, and also making allowance for all sums necessarily or properly expended in obtaining parliamentary authority to construct the tramways, or any other expenditure properly made to enable the tramways to be constructed, as, for instance, upon widenings."

Furthermore, where companies continued operations after 1900, and applied for powers to electrify and extend, Parliament often gave them the reward of a period longer than twenty-one years before compulsory purchase was possible, or allowed for purchase as "a going concern," and this term includes more imponderability than "then value."[3]

Under the Electric Lighting Act of 1882 (amended by the Electrical Lighting Act of 1888, Sec. 3), the local authority must pay "the then value of all lands, buildings, works, materials, and plant of the undertakers suitable to and used by them for the purpose of their undertaking."[4] The value of these things is to be deemed to be their fair market value at the time of purchase, regard being had to their nature and their condition and state of repair, and to the fact that they are ready for immediate working, and to their suitability for the purposes of the undertaking, and to any loss occasioned by severance, *but without any addition for compulsory purchase, goodwill or profits, or other similar considerations.* In the case of difference the matter is determined by arbitration. The terms of purchase could be varied by the Provisional or Special Order under the control of the Electricity Commissioners, in such manner as may have been agreed between the parties, and such variations are common. The law relating to gas undertakings is vague, but it appears that "goodwill" is included[1]; and the same holds good of water undertakings.[2]

---

[1] Cf. Robertson, *Law of Tramways and Light Railways in Great Britain*, 1903, p. 4, warned against the view that they were purchasable "for what is called 'old iron price.'"

[2] Will's *Electricity Supply*, 6th ed., p. 154.

[3] Local authorities who bought on such terms were losers where the trams could not make a profit—and this often happened. *Why* local authorities bought is stated elsewhere.

[4] Section 27.

Thus since the law offers only fairly general rules, and is not in a position to state them in quantitative terms, much depends on the rules adopted by expert negotiators consulted by both parties. For it was held by Lord Herschell,[3] in the case of the purchase of a water undertaking, that the arbitrator might take into consideration the fact that the system was complete and working, and on that ground allow something more than the mere cost of construction. Will[4] holds that an electric supply undertaking differs from a tramway undertaking in this, that in the case of the former the undertakers may be out of their capital, and obtaining no return upon it or a large part of it for a considerable time, while in the case of a tramway, as soon as it is completed it is in most cases in a position to earn immediate return on the capital expended.

"Each of these cases . . . depends, not upon any rule or principle of law of general application, but solely and entirely upon what is the just construction of the language, whether of statute or agreement, regulating the measure and nature of the claim."[5] The method of negotiators is, generally, to discover the net maintainable revenue, estimate the prospects of the business—whether it is likely to go up, or down, or remain steady—and then to apply to the first factor a multiplier based upon the second. There is ample ground for divergence of view in these factors, and if the matter cannot be settled by agreement it goes to arbitration, the arbitrator frequently being one among the King's Counsel at the Parliamentary Bar. It can be asserted with confidence that a local authority does not pay any more under this procedure than any private business firm would. This does not mean that there is no margin of the arbitrary judgment at all, whether in municipal enterprise or private business: that the judgment is automatic. An expert negotiator has informed me that in a concern priced at £150,000 it would be difficult to avoid margins of £10,000 above or below, dependent on skill in negotiation. This view, of course, makes the negotiator's services very valuable. And in at least two cases there must have been considerable doubt as to the justice of the amount in question. In the purchase of the St. Marylebone Borough Council electricity undertaking in 1903, the arbitration proceedings lasted thirty-three days, and whereas the Company claimed £2,750,000 and an additional 10 per cent for compulsory purchase, it was awarded £1,212,000, with an additional £200,000 for capital expenditure incurred since service of notice to treat. The Oxford Electricity Company's undertaking was sold to the Wessex Company for £239,000 which was claimed to be a fair valuation; Oxford City was prepared to pay £300,000, which was also regarded as a fair valuation.[1]

---

[1] Michael and Will, *Law Relating to Gas and Water*, 7th ed., 1924, vol. i, p. 43.

[2] Ibid., vol. i, 602, 603.

[3] *Stockton and Middlesbrough Water Board* v. *Kirkleatham Local Board* (1893), A.C.

[4] Will's *Electricity Supply*, 6th ed., p. 154.

[5] *Hamilton Gas Co. Ltd.* v. *Hamilton Corporation* (1910), A.C. 305.

It should be noticed that the pressure to pay the upper limit in any doubt about valuation has not infrequently come from the bad state of the service given by private undertakings. The local authority is between the devil and the deep sea. If it does not buy quickly, it is criticized for permitting inferior service and high prices or fares. This was the case, for example, in several tramway purchases.

---

[1] Cf. proceedings House of Lords Committee on Oxford Corporation Electricity Bill to purchase, May 10–17, 19, 1938.

Chapter Seven

LOANS, DEPRECIATION AND RESERVES

LOANS, DEPRECIATION AND RESERVES

We have seen that local authorities receive their powers to borrow from certain general statutes and private Acts, and that the terms on which they may borrow under general law are subject to the sanction of the central departments. The central departments and local authorities are therefore concerned with the choice of whether certain works should be paid for out of loan or revenue, and, if the former, the period and mode of repayment.

The first question cannot be, and is not, answered with rigid precision by the central departments. They know that when an expenditure is regarded as payable out of immediate revenue, it ceases to come under their financial and technical review. They cannot dictate what shall be paid for by loan.[1] Nevertheless, by steady pressure and diplomatic argument, and occasionally by making a local authority smart (when it asks for some other favour) for an earlier displeasing response, they are able to keep the local authority on reasonable lines. For example, in a General Circular, November 1927, the Electricity Commissioners expressed approval of the practice of meeting expenditure on short-lived works from revenue. This procedure was made possible by Section 43 and the Fifth Schedule of the Act of 1926, and covered the cost of regularly recurring expenditure on distribution works, such as house services, meters, wiring of premises, provision of apparatus on hire or hire purchase. The Commissioners gave their general consent to the application of "the net surplus in payment of expenses of providing works as aforesaid in all cases where the reserve of the electricity undertaking is not less than one-twentieth of the aggregate capital expenditure, subject, however, to the amount so applied being not more than 5 per cent of the revenue of the year in which the surplus was obtained." This avoided, for the future, individual applications. But the Commissioners notified their intention of requiring certain particulars where local authorities wished to apply net surplus to capital purposes falling outside this consent. Furthermore, the Electricity Commissioners keep a watch on new developments. Where, for some temporary financial reason, a local authority decided to reverse the practice of buying such apparatus as wash-boilers or water-heaters out of revenue, it reconsiders and determines anew the term of repayment, almost always consulting the I.M.T.A. first.

---

[1] The 5th Schedule to the Electricity Supply Act, 1926, gives the Electricity Commissioners the power to say what expenditure may be paid for out of loan, because no expenditure of a capital nature may be charged to revenue except with heir consent.

No statute compels a local authority to proceed by borrowing; it is given the privilege to ease its progress. Naturally, for durable works of any magnitude, a loan is regarded as the only way to finance the enterprise, because ratepayers would not consent to pay, over a short period, for expensive assets which would last a long time.

However, during development there are works and equipment of a capital nature which might be regarded as replacements or renewals. Further, there are new developments of expenditure for which the local authority might well decide to pay out of revenue, if not of any one year, then of a short term. This problem of the distribution in time of the incidence of capital costs has always aroused debate, and the local authorities have in each case to come down on one or the other side of the question.

It is well to review the arguments used in municipal discussion. Those who favour the method of immediate payment are impressed by three factors: fairness to posterity, the avoidance of interest charges, and the special caution with which immediate expenditure will be incurred. They argue that it is not fair to put the burden on the shoulders of posterity. This argument is convincing in the case of a quickly wasting asset and a rapidly developing technology. If long-term loans are raised to acquire such an asset, people some thirty years hence may be paying for benefits which have been received by those now dead or old, and may therefore be hampered in their own attempt to raise the means necessary to meet the demands of new technique.

Secondly, payment out of revenue means that a smaller total amount has to be paid for the land and equipment required. The late Mr. Arthur Nettleton showed[1] how heavy is the ultimate burden involved in a policy of progress by loans. He used the example of debt charges on a loan of £10,000 a year for forty years at 5 per cent. With equal annual instalments of principal and interest on the diminishing balances, there will have been repaid £481,740 (interest £276,740 and principal £205,000). Yet at the end of the fortieth year there will be still an outstanding debt of £195,000. The same transaction repaid on the annuity system of equal annual instalments of principal and interest combined leaves the authority with an outstanding debt of £256,226, it having paid £334,107 in interest, and £143,774 on account of principal, i.e. £477,881 in all. The two cases respectively imply an annual debt charge of £12,043 and £11,947. His comment is: "Relief is obtained by borrowing in the early years; in the first year there is a total debt charge of £750 as compared with raising the £10,000 directly in the rate. This relief diminishes year by year until we find that in the sixteenth year the total debt charge is £10,500, that is, in excess of the £10,000 to be borrowed that year, and this disadvantage increases year by year until, when the fortieth year is reached, we find that the annual instalment of repayment amounts to £10,000, and, in addition, the year's interest charge is £10,250, so that the total annual charge is more than double what would have been the direct charge on the rate for the year had resort to borrowing not been the order of the day. . . . These tables show, I think, as clearly as anything can, the uneconomical side of continuous borrowing and to what extent the penalty affects the privilege." There is sound sense in this argument. Yet there are great psychological difficulties in raising money out of people's purses immediately. But if the loan policy is followed injudiciously it must be accompanied by higher charges to consumers now or in the future.

---

[1] *I.M.T.A. Lectures to Students Societies*, 1926, pp. 26 ff.

Now local councillors can effectively apprehend the foregoing argument of prudence and economy, but it is otherwise with the resolution to follow the lesson taught. There is enormous reluctance to raise money as current revenue and therefore higher rates. From time to time even petty sums are raised by loans. The policy of payment from revenue also encounters opposition from those who press the view that economic loss must be sustained if large amounts are taken out of the hands of the citizens so that they are not available for their own businesses. Of course, in the case of very large works the amounts of money required would be crippling to the private incomes of the ratepayers in any particular year.

Thirdly, pay-as-you-go theorists argue that money derived from current revenue is likely to be spent with very great caution, and that this will be reflected in a reduction of the amount actually asked for, or in the obtaining of better value for their money. It is once more the psychological law of the greater intensity of impressions of the present over imagination of a distant future. Yet there are men of experience in local government who are inclined to the view that this cannot by any means balance the care with which applications to borrow are scrutinized by the central authority, especially where the money asked for is in excess of an amount previously sanctioned. It is seriously questioned by some whether capital expenditure out of revenue is subject to particular examination—except by the Treasurer.

However, there is a strong feeling in favour of putting off the day of reckoning. It has in the past been so strong that local authorities have had to be subjected to statutory compulsion to provide for repayment in a reasonable time. There is one other strong force to take into account. The present generation does not start with a clean sheet in the matter of loans. It is already burdened with a great deal inherited from the past. For example, the rate burden for loan charges on non-trading services is £63,000,000 on £155,000,000 of rates, or 8s. in each £ of rates raised for the whole country; and in the case of the trading undertakings the loan charges are equivalent to about:[1]

Water undertakings	50 per cent of revenue income		
Electricity	34 per cent	,,	,,
Gas	16 per cent	,,	,,
Tramways	15 per cent	,,	,,

In the course of time and by trial and error both local authorities and the central departments have arrived at some balance between these conflicting considerations.[2] This is reflected in the selection of the particular things which are regarded as normally to be paid for out of borrowing and the term allowed for the amortization of the loan. Around these two factors small margins one way or the other reflect the particular individual needs and capacities, and even whims, of various local authorities. But these selected factors stand as the basic answer to the relative merits of the arguments and strength of feeling just outlined. We shall shortly state in detail what they are.

Before the War the practice of the Local Government Board was generally to place thirty years as the maximum, thinking in terms of what is commonly taken as "a generation." Since that time, and now enshrined in the Local Government Act of 1929 (later codified in the Act of 1933) the period has been extended to a maximum of sixty years.[1] Within this limit shorter periods are taken; and, in some exceptional cases, much longer periods are permitted, in accordance with principles which will be explained presently. Moreover, the Law Courts have in a number of cases hedged loans about with rulings to make illegal loans raised without authority, by means of mortgage or overdraft, or by wrapping up debts in rate estimates.[2] Local authorities are thus prevented from undertaking expenditures which they themselves, in order to escape submission to the central departments, might not define as loans.

---

[1] Cf. Tables, pp. 425 ff.

[2] For example, the whole subject was reviewed by the Select Committee on the Repayment of Loans by Local Authorities of 1902, B.P.P., 1902 (239), viii.

This leaves us with the question of the policy adopted by the central departments regarding the repayment of loans, in pursuance of their statutory power of consent to a loan where "in the opinion of the sanctioning authority . . . the cost of carrying out that purpose ought to be spread over a term of years."[3] This question involves the very interesting point whether a local authority should put aside special sums for depreciation. On this matter a joke circulates among municipal treasurers concerning the question that used to be asked years ago of examination candidates (but now abandoned): "Should a municipality provide for both debt redemption and renewals year by year?" Opponents of municipal undertakings have invariably made the lack of a depreciation account a principal criticism. They have argued that its absence means that the accounts of profit and loss are unsound, and that many authorities that show profits would be showing a loss if it were taken into account, while authorities ought to be showing at least a smaller surplus than they do. Critics allege that, by not including an amount for depreciation, they are giving the present generation the benefit of lower charges than are really required by a due consideration of the real cost of production. In the words of Sir Ernest Benn, regarding the extension of the maximum period for loans from thirty to sixty years in the Local Government Act (1929 and 1933), they are "living on posterity." But when we have careful regard to the actual practice of loan sanctions, we cannot resist the conclusion that municipal practice is far sounder than many private businesses.

Let it be recollected that the size of the loan and its purposes are established in a private Act after Parliamentary enquiry or by an

---

[1] Section 198.

[2] See especially *Smith* v. *Southampton Corporation* (1902), 2 K.B. 244; *Attorney-General* v. *De Winton* (1906), 2 ch. 106; *Attorney-General* v. *Tottenham Urban District Council* (1909), 73 J.P. 437; *Attorney-General* v. *West Ham Corporation* (1910), 2 ch. 560; *R.* v. *Locke* (1910), 2 K.B. 201. Cf. Jennings, *Law Relating to Local Authorities*, 267 ff.

[3] Local Government Act, 1933, Section 195 (c).

Order of the sanctioning department. The conditions laid down are also amended from time to time to accord with the more recent experience of the economic life of assets. In regard to gas undertakings the usual maximum periods are:

	Years
Cast-iron mains	30
Meters and stoves	10
Steel mains, untapped	30
Gas holders	30
Retorts	20
Exhausters	20
Condensers	30
Service pipes	20

Loans for electricity undertakings are sanctioned as follows:

	Years
(*a*) Land and Property:	
Freehold	60
Leasehold (subject to the duration of the lease)	30
(*b*) Buildings: Civil engineering works, engine-house cranes, etc.	30
(*c*) Plant and Machinery, including generating and steam-raising plant, switchgear, converting plant and sub-station equipment, etc.	20
(*d*) Storage Batteries	7
(*e*) Portable and Testing Instruments	10
(*f*) Furniture, Fittings, and Fixtures	10
(*g*) E.H.T. Main Transmission Lines:	
(1) Underground mains (according to voltage and other circumstances	40 and 25
(2) Overhead lines	25
(*h*) Mains and Services: Overhead lines (including supports), underground mains, feeder pillars and boxes and house services	25
(*i*) Consumers' Meters, etc.:	
(1) A.C. meters which are capable of ascertaining the value of the supply within the prescribed limits of error at the standard low pressure of 230 volts and the corresponding medium pressures (400 or 460 volts)	15
(2) Other meters, time switches, and current limiters	10
(*j*) Wiring of Consumers' Premises	15
(*k*) Electrical Appliances let on hire (or hire-purchase) to consumers:	
(1) Cookers and industrial motors	10
(2) Other appliances	7

NOTE.—The loan sanction contains a proviso which (in the case of hire-purchase) ensures that the loan debt on the appliance concerned shall be paid off by the time it becomes the property of the consumer.

	Years
(*l*) Vehicles:	
(1) Not self-propelled:	
(*a*) 20-ton steel railway waggons	20
(*b*) All other coal or ash trucks and waggons	10
(2) Self-propelled:	
(*a*) Steam, or petrol	7
(*b*) Electric	10

In regard to water undertakings:

	Years
Land	60
Dams and tunnels	40–50
Mains	30
Concrete reservoirs	20
Machinery	15
Perishable equipment	10

Some exceptional cases are big impounding schemes, for which a period of seventy years has been allowed in some cases, and to Manchester even eighty.

In regard to transport:

	Years
Tramlines and poles, etc.	20
Tramcars	20
Motor omnibuses	8
Trolley-buses	10
Trolley vehicle route equipment	20

Another example, in 1932, the Ministry of Transport stipulated that Plymouth's loan for fourteen buses should be repaid in eight years, the official computation of the lifetime of the vehicle. Rotherham replaces oil and petrol buses at the rate of one-seventh of the fleet per year, and trolley-buses at one-eighth. Most transport undertakings, however, find their buses obsolete in a shorter period, and therefore, either buy them out of revenue or, if that is impossible, try to repay their loans within five or six years.

The central departments are remarkably cautious in their loan-sanctioning policy. To begin with, they make a very careful technical examination of the assets and their durability, in consultation with practical experts throughout the country. This done they leave an ample margin, so that in so far as any human being can foresee, the future loan repayment is in advance of the depreciation of the asset. Secondly, their own technical experts inquire into the technical quality of the actual equipment which the individual local authority in question wants to purchase, thus giving sound guarantees to the local ratepayers and consumers. Furthermore, the local authorities, who themselves have experts in their employ and who engage consultants from time to time, are by no means inert during the time that scales of depreciation are being considered. Through their associations they comment on the central departments' proposals, offering their experience to temper the opinions of the former.[1] Thirdly, when there is local opposition to the scheme, which in the eyes of the central departments is not merely frivolous—and the departments err on the side of generosity in their regard for opposition—there is a local enquiry at which the municipality puts forward the ground for its proposal and opponents may state their case.

Finally, a local authority's request for a loan will not be judged without relation to its general financial situation. There is very close co-operation between the sanctioning department and the Ministry of Health, which has a special knowledge of the quality of administration in each locality. For example, there may be complaints made by the Ministry of Health in regard to loans for water undertakings where waste is suspected or proven, and especially where, in the case of industrial consumers of great quantities, water has been supplied without meters. Or again, as when in 1931 Hull City wanted to replace gas lighting in the streets by electricity, and asked for a loan of £67,000 to do it, a local enquiry was held in which the representative of the gas companies had an opportunity of stating the economies of the matter as seen from his point of view. The Ministry thought that electricity might be desirable for the main streets, but that gas should be retained for the side streets.

In view of these facts it is obvious that the typical arguments of critics of the loan finances of municipal undertakings are unsound. Carson Roberts[2] has conclusively refuted them. He first points out that if provisions are made for depreciation over and above the sums provided for the repayment of debt, then at the end of the time the entire capital debt will have been wiped out and there will be money in hand to replace all the land, buildings, and equipment. This will have cast a heavy and unjust burden on the ratepayers of the past period. Secondly, to the criticism that the provision for renewals is inadequate, he observes that it is a fallacy to assume that every main, every boiler, engine, or other item of plant continuously wastes away to the end of its life, when it has to be replaced in its entirety. The fact is that if renewals and replacements were not made concurrently, the machinery and the rest would never be up to concert pitch.

---

[1] For example, in November 1936 the Association of Municipal Corporations protested that the scale of depreciation under Section 39, Electricity (Supply) Act, 1926, proposed by the Electricity Commissioners was too low. Having regard to "the usual physical life of the assets" (motor vehicles and apparatus let out on hire) the depreciation period was declared to be too long. Further, in the majority of cases the depreciation periods were longer than periods of years usually obtainable for loan sanctions. Cf. *Municipal Review*, January 1937, p. 43.

[2] *Local Government Administration and Accounts*, pp. 22 ff.

Thirdly, we arrive at the fallacy that in any case obsolescence funds should be provided against the possibility of the invention of more efficient plant or more efficient methods. This possibility is what Mr. R. F. Fowler has distinguished as "changes in the value of capital goods as a result of change in the demand for the product or changes due to technical progress . . . dynamic changes."[1] These are not mere wear and tear. On this matter, Carson Roberts observes that, in the case of a private entrepreneur the possibility of obsolescence is a heavy risk, because a private business acts under competitive conditions and at any time a new entrant may overthrow the existing concerns. A local authority is usually not exposed to this form of competition. It has a local monopoly, or else it is the latest entrant. So far, Mr. Roberts's argument is sound. But then he uses a conclusion which is distressing and dangerous: "It (the local authority) need not adopt the new invention, and it will not adopt it unless it is advised that it will pay to do so."[2] Who will advise a local authority at the right time to give up tramways and to establish alternative transport facilities newly invented? Who will give timely advice to a local authority to discard, let us say, its gas undertaking for electricity? Clearly, that advice must come from the technical manager, and no doubt it will be given in accordance with Mr. Roberts's expectations.

But will it be accepted by the final authority on the matter, namely the councillors? The history of local government shows that there is a good deal of stickiness in the development of municipal undertakings because of the unwillingness to discard assets which still have some life in them, as such a course is regarded as waste. It is of the same order of argument as that land and buildings or equipment are "lying idle." But it has been forcibly pointed out by Mr. G. J. Ponsonby[3] and it is amply confirmed by Mr. Fowler,[4] that a point of time comes when the running charges mount very rapidly because the wearing-down of the original plant demands more and more repairs and renewals, so that the cost of upkeep of the plant is equal to or exceeds the receipts.[1] From time to time plant is not merely at an uneconomic level of quality but at a dangerous one. A local authority is loth to admit this and to write off assets which can still stagger about. It wants some hardihood to ask the ratepayers to provide fresh money to meet new investment. Can it be said that the provision for the repayment of debt is adequate to meet, not merely the material wearing away of the equipment, but also the fall in the return caused by the introduction of alternative methods of satisfying that particular want? Repayment policy is calculated on the time material wears out, but not much, if any, account may have been taken of the possibility that the very idea of that undertaking may be expunged as an enterprise which will satisfy the consumers.

---

[1] *The Depreciation of Capital* (1934), pp. 9 ff.

[2] Op. cit., p. 23.

[3] Cf. *Economica*, November 1935, "An Aspect of Competition in Transport"; and "What is Wasteful Competition?" in *Modern Transport*, February 2, 1935.

[4] Op. cit., passim.

However, it must be admitted that there are some developments entirely unforeseeable.[2] It cannot be put down to the discredit of tramway authorities that in 1900, or even in 1910, they did not foresee and did not provide for the possibilities of motor omnibus transport at the other end of the Great War which stimulated every invention and particularly the internal combustion engine. As soon as such possibilities are foreseen, calculations of the period of the repayment of the loan must be undertaken. This is already being done in the case of electricity; and in the other undertakings the provision for reserves to meet unexpected claims and developments is now a regular policy of both Parliament and the sanctioning departments. In the matter of electricity the big private companies first realized the need for care and foresight, and twenty years ago worked out a schedule of the life of particular assets. Later, local authorities realized the difficulties, and they and the central authorities between them shortened the period of repayment in respect of certain assets. In order to meet what Mr. W. E. Foden, formerly financial controller of the Manchester Electricity Department has called "a restless dynamic industry," the Electricity Supply Act of 1926 (Section 43) put back the payment in aid of rates until the reserve fund amounts to more than one-twentieth of the aggregate capital expenditure on the undertaking. The reserve fund here men-

---

[1] In introducing new plant the issue is whether the marginal receipts of the undertaking after renewal will exceed those of the previous one.

[2] In the very early days of trams and electricity no actual experience was available for the life of assets, and too long periods of redemption were allowed.

MUNICIPAL TRADING SERVICES

OUTSTANDING LOAN DEBTS, RESERVES AND PROVISIONS FOR RESERVES

NOTE.—In these tables the columns for "Gross outstanding loan debt" and "percentage reserve to loan debt" show the position as at each March. The columns for "Payments to reserve funds, etc.," represent the amounts transferred during each financial year ended in that March.

Undertaking	March 1909			March 1925			March 1934			March 1937		
	Payments to reserve funds, etc.	Gross outstanding loan debt	Percentage reserve to loan debt	Payments to reserve funds, etc.	Gross outstanding loan debt	Percentage reserve to loan debt	Payments to reserve funds, etc.	Gross outstanding loan debt	Percentage reserve to loan debt	Payments to reserve funds, etc.	Gross outstanding loan debt	Percentage reserve to loan debt
(i) *County Boroughs, Non-County Boroughs and Urban Districts*												
	£000	£000	Per cent	£000	£00	Per cent	£000	£000	Per cent	£000	£000	Per cent
Water	113	66,925	1	130	74,014	8	308	91,674	8	349	91,642	7
Gas	107	22,794	4	379	23,822	16	479	24,885	16	545	23,194	16
Electricity	204	23,668	5	892	55,568	9	1,501	115,134	6	1,292	131,717	6
Transport	361	24,479	8	1,184	25,331	16	1,163	21,916	13	1,420	18,985	10
TOTAL OF THE FOUR SERVICES.. ..	785	137,866	4	2,585	178,735	10	3,451	253,609	8	3,606	265,538	7
(ii) *County Boroughs*												
Water	109	50,723	1	111	63,534	8	267	72,476	8	267	71,841	8
Gas	90	15,089	5	346	16,314	18	415	17,101	18	482	16,096	18
Electricity	180	17,002	5	729	44,075	10	1,138	88,010	7	1,008	100,550	7
Transport	350	20,134	9	1,166	21,801	17	1,119	19,371	14	1,360	17,108	11
TOTAL OF THE FOUR SERVICES.. ..	729	102,948	4	2,352	145,724	11	2,939	196,958	9	3,117	205,595	8

* For the year 1909, payments to reserve funds and the percentage of reserve to loan debt are for County Borough and Non-County Borough only.

MUNICIPAL TRADING SERVICES

OUTSTANDING LOAN DEBTS, RESERVES AND PROVISIONS FOR RESERVES—*continued*

Undertaking	March 1909			March 1925			March 1934			March 1937		
	Payments to reserve funds, etc.	Gross out-standing loan debt	Percentage reserve to loan debt	Payments to reserve funds, etc.	Gross out-standing loan debt	Percentage reserve to loan debt	Payments to reserve funds, etc.	Gross out-standing loan debt	Percentage reserve to loan debt	Payments to reserve funds, etc.	Gross out-standing loan debt	Percentage reserve to loan debt
					(iii) *Non-County Boroughs*							
	£000	£000	Per cent	£000	£000	Per cent	£000	£000	Per cent	£000	£000	Per cent
Water	4	10,683	7	14	9,939	8	35	12,234	6	63	12,608	5
Gas	17	4,196	4	17	4,251	15	47	4,592	18	45	4,453	15
Electricity	24	4,211	2	134	7,535	5	268	20,808	2	246	24,591	2
Transport	11	2,216	1	16	1,868	6	34	1,923	3	51	1,411	4
TOTAL OF THE FOUR SERVICES.. ..	56	21,306	5	181	23,593	8	384	39,557	6	405	43,063	4
					(iv) *Urban Districts*							
Water	Not available	5,519	Not available	5	5,411	4	6	6,964	2	19	7,193	3
Gas		3,509		16	3,257	5	17	3,192	4	18	2,645	4
Electricity		2,455		29	3,958	1	95	6,316	1	38	6,576	1
Transport		2,129		2	1,662	1	10	622	3	9	466	1
TOTAL OF THE FOUR SERVICES.. ..		13,612		52	14,288	3	128	17,094	2	84	16,880	2

SOURCE: Annual Local Taxation Returns.

tioned is one which may be built up out of non-capital receipts if the local authority thinks fit, by setting aside such money as it thinks reasonable, but the maximum must not rise above one-tenth of the aggregate capital expenditure on the undertaking. The purpose of such reserve funds is "to answer any deficiency at any time happening in the income of the undertakers from the undertaking, or to meet any extraordinary claim or demand at any time arising against the undertakers in respect of the undertaking."

The balance in hand at the end of 1935–36 for all municipal electricity undertakings was nearly £15,000,000, or nearly 4·8 per cent on their capital outlay. Yet, neither in the case of electricity nor any of the other undertakings will the mere total of reserves, or percentage of reserves to any unit of comparison, tell all that must be known: for an authority with apparently low reserves may yet have paid for much capital assets out of revenue.

Altogether, then, these provisions and methods give ample grounds for the opinion often asserted of the soundness of the finances of British local authorities.[1] The tables show not only the improvement in the reserves since 1909, but that the provision of reserves is ampler in the larger than the smaller authorities.

There is a large body of opinion in the local authorities which favours the writing-off from capital account of any discarded assets. Here and there are local authorities which retain such assets in their accounts, either through sheer absence of mind or in order to give an undeservedly prosperous complexion to the figures of their undertakings. Such cases detract from the generally sound condition of the finance of municipal undertakings. It is interesting to notice that the Ministry of Health's Memorandum to accompany the Accounts Regulations of 1930, while insisting that properties or works which are capital assets shall be so treated and so specified, calls attention to the need for excluding from such records "alienated or exhausted items." The Memorandum says: "In the case of a trading undertaking it involves the keeping of an inventory of capital plant which shall be annually certified as to its unexhausted condition by the Chief Engineer and as to its cost by the Chief Financial Officer. . . . If in any case an asset is thus written off when loan is still owing in connection with it, it is clearly desirable that the remaining loan-debt should at once be discharged or counterbalanced by sinking fund provision."

---

[1] Cf. Twenty-fifth Annual Conference, British Commercial Gas Association, October 1936, pamphlet, p. 5.

It would be hard to blame local officials for seeking to extract from plant the last drop of utility before discarding it, but such practices (which come to notice in many municipal works) cannot legitimately give rise to monetary expressions of their value omitting the fact that the plant is about to disintegrate.

THE METHODS OF BORROWING

Although the central authority strictly controls the power to borrow, as we have seen, it leaves the methods of borrowing largely to the discretion of the local authority, although there is an underlying and compulsory code established by Parliament. The principal methods of borrowing are:[1]

> (*a*) The issue of redeemable stock, under authority of a local Act, is what is more usual, under the Stock Regulations of 1934 deriving from the Local Government Act of 1933.

This method is frequently employed to raise large sums by county borough councils and the larger non-county boroughs and urban district councils. The usual method is to make a public issue through the medium of the London Money Market based upon a prospectus. It is no longer permissible, as it was many years ago, to issue irredeemable stock, and the change in policy came about because Parliament thought it unwise to fetter the future demands of a later generation.

> (*b*) The issue of mortgages, secured on the rates and revenues of the local authorities.

This method is generally used by all types of council, and in many cases is the exclusive method of borrowing. Here the local authorities concerned are raising loans for periods usually less than where the method of a stock issue is utilized. It is not necessary to come to the money market; by means of mortgages the local authority is able to get the capital it wants from private persons, banks, or insurance companies. In the case of smaller authorities the Public Works Loan Commissioners are available.[2]

---

[1] Cf. Local Government Act, 1933, 23 & 24 Geo. V, 1932–33, ch. 51, part ix, Borrowing.

[2] Cf. Jennings, *The Law Relating to Local Authorities*, p. 682. The Commissioners lend money only to authorities whose funds are too small to enable them to borrow in the open market at a low rate. In practice loans are restricted to places with a rateable value not exceeding £200,000, and to those where this amount is exceeded for housing, public health, education, allotments. The amount available for municipal undertakings is practically negligible. Treasury sanction could permit an increase on this. Cf. also Annual Reports Public Works Loans Board.

(*c*) The issue of debentures, debenture stocks, and annuity certificates under the Local Loans Act of 1875, of little use because of its restrictive nature; the issue of bills under private Acts of a few of the larger local authorities; the issue of corporation bonds similarly under private Act powers; by bank overdraft or other temporary borrowings until a long-term loan is raised.

(*d*) The use of a local authority's own sinking and redemption funds, and funds for reserve, superannuation, and insurance.

It is not our intention to enter into the respective merits of the different methods of repayment. It is enough to say that these have been thoroughly investigated and fully tested by the diverse experience of hundreds of local authorities during half a century. But two things are worth discussion: (1) the methods of repayment authorized by statute, and (2) the important recent movement towards the pooling of local loans.

As to the first question, we can be brief. Three methods of repayment are authorized. First, the instalment of principal system: the lender is paid throughout the prescribed period of the loan an equal annual or half-yearly instalment of the principal, plus the interest on the loan outstanding at the end of each period. Second, the annuity system: the lender is paid each year or half-year during the period of the loan an equal sum covering both principal and interest. The third, which has given rise to the most interesting developments, is the sinking-fund system. Under this a sum is set aside each year sufficient to repay the loan within its prescribed period. This fund may be accumulating, when it is formed by annual contributions which are invested at compound interest to produce the required sum when the loan terminates; or it may be non-accumulating, when there is merely set aside an equal annual contribution not producing interest, to provide the required sum at the end of the loan term.

To come to the question of pooling loans, the sinking-fund system is obligatory where the loan has been raised by stock; and, in fact, even where it is not obligatory most local loans are redeemed by this method.[1] Two problems have arisen in recent years, the solution of which has much simplified the financing of capital expenditure of local authorities and brought about the possibility of important savings on interest. It was believed until recent years that all loans were earmarked to the borrowing power. There was no authority for

[1] Cf. Long and Maxwell, *Use of Sinking Funds, etc., for Capital Purposes*, Institute of Public Administration, 1936; and Drummond and Marshall, *Consolidated Funds of Local Authorities*, 1938. Mr. Fowler, op. cit., chap. vii, commends this practice as the best economic practice.

this belief either in statute or in administrative regulation of the central authority. It was simply the practice of the local authorities and of the bodies who lent them the money. Procedure founded upon this belief made it impossible to use the accumulating funds for the repayment of the earmarked loan for some other capital purpose of the local authority. Some authorities, bolder than the rest, did assume the right to transfer loans from one borrowing power to another; and they were able therefore to use all their sinking funds annually to repay loans or reduce their new borrowings.

Partly under the influence of the Ministry of Health, guided by the advice of Mr. Carson Roberts, and partly through the intervention of Parliament, it has been made possible to pool loans where they are not earmarked, that is to say generally on mortgage loans, and indeed the Borough Accounts Order of 1930 actually required these to be pooled. Matters were more difficult with stock issues, as there the earmarking was clear until 1901 under the Stock Regulations. At that date some elasticity was introduced, but it is still necessary to obtain authority by private Act in order to consolidate the loans into one fund. Meanwhile the local authorities have other funds of some importance: reserve funds of the trading undertakings which must be invested in specified outside securities unless the local authority has a Private Act Clause permitting their internal use; there is the money in the superannuation fund, under the Superannuation Act of 1922, and this may be used for the borrowing purposes of the local authority; and then there are insurance funds, capital funds, and capital reserve funds established by private Act which usually permits their internal use.

The subject of internal use of these funds was thoroughly investigated by the Select Committee of the House of Commons of 1909 on the Utilizing of Sinking Funds, etc., for the Repayment or Redemption of Loans. In its report (Cd. 193, 1909) the Committee concluded "that the general principle involved in the application of sinking funds in the exercise of borrowing powers is financially unobjectionable." It was much impressed by the argument that this afforded an easy method of borrowing without adding to the total outstanding debt of the local authority, and avoided the expense of that amount of fresh borrowing; it saved the expense of the purchase of stock for extinction, even if that were possible, and saved the expense of investing the fund. Since the power would only be used when borrowing conditions were unfavourable, there was a clear potential gain. To the fears expressed on the grounds of the elimination of earmarking the Select Committee opposed the argument that the real security of the loan of a local authority is the rates and revenues, and that it was enough if safeguards existed that the local authority would continually set aside such funds in order to liquidate its debts.

Since the report of that Committee great advances have been made. The Superannuation Act of 1922 gave a general authority for the internal use of the largest of all the funds held by the local authorities. In 1923 Torquay and Macclesfield obtained powers to set up consolidated loan funds, and since then other authorities have obtained powers. The first scheme to be actually established was that of Leeds in 1927. On the basis adopted by Leeds the Ministry of Health and the Institute of Municipal Treasurers and Accountants drew up a model scheme in 1929, and all schemes which subsequently came into operation follow this model very closely. The schemes must be approved by the Ministry of Health.[1] A careful investigation made in 1936 revealed that two-thirds of the Superannuation Funds were invested internally. The investigation embraced 40 cases (which included 30 borough, 5 counties, and 5 Scottish burghs), and showed that of a total gross debt of approximately £128,000,000, local authority funds (reserves, sinking, superannuation, insurance, etc.) accounted for £14,000,000.

This is as yet not an enormous sum, but the steadiness of the trend in this direction and the amount of discussion aroused, gives rise to the expectation that the economies derivable from this type of financing will become progressively available for local authorities in general and their trading undertakings in particular. Yet the policy is not without some drawbacks. It has been argued[2] that the utilization of a corporation's superannuation funds for its municipal purposes is embarrassing to the Council from two points of view. It has been desirable to raise corporation loans for long periods at a low rate of interest; on the other hand the corporation has an obvious duty to obtain the best interest rates available, say by investing its superannuation or other funds outside. The two interests conflict.

---

[1] By the end of 1938 twenty-five county boroughs and fourteen non-county boroughs had adopted schemes.

[2] City Treasurer of Coventry, Abstract of Accounts, preface, 1937–38.

Chapter Eight

RATE AID AND PROFITS AND LOSSES

UNTIL 1925 local authorities were merely empowered to levy rates; by the Rating and Valuation Act of 1925 they are *compelled* to make such rates each year as to avert a revenue deficiency. They are required to add to the total estimated expenditure of the rate an additional amount which in the opinion of the authority is required to cover expenditure previously incurred. Section (12) also gives power to include in the amount for which the rate is levied enough to meet contingencies or defray expenditure which may become due before the date on which the money receivable in respect of the next subsequent rate becomes due. But it is doubtful whether this goes so far as to give power to provide trading revenues with working balances at the expense of the rates. One other point ought to be noticed. The Rating and Valuation Act imposes upon local authorities the duty of including in their demand note for rates the amount in the pound which is being levied for the expenses of the *rating* authority, and the amount in the pound, if any, for each of the services rendered by the *local* authority. These provisions, and the rules and orders[1] which have carried them out, have made it incumbent upon local authorities to declare clearly the amount, if any, in the pound levied to make good deficiencies in trading accounts, and the amount by which the rates are benefited by transfers from trading surpluses.

All this makes for clarity in an important issue. Assuming that one works for a surplus and achieves it, or that a surplus comes accidentally, is it to be applied to the relief of rates or to the improvement of the undertaking by better service or the reduction of prices? In the early years of municipal enterprise, the hope of securing surpluses in order to aid the general rates was actually a very strong inducement to its origination.[2] Powers to use the surpluses in this way are to be found in local acts, for example, Birmingham Corporation (Consolidation) Act, 1883, Section 163, runs:

> "The Corporation shall from time to time carry to the credit of the improvement rate leviable under this Act the net surplus remaining

---

[1] Forms of Demand Notes, Rules, 1930, S.R. & O., No. 542.

[2] Cf. pp. 38 and 50, supra, on Birmingham and Manchester.

> after the fulfilment of the several purposes aforesaid and the annual proceeds of the reserve fund when amounting to one hundred thousand pounds."[1]

This motive is still strongly at work, despite new tendencies.

Secondly, since the rates are under liability in the event of loss it seemed fair to local authorities that they should try to obtain a surplus in order to offset any eventual liability. An extension of this view is applicable where a local authority supplies those who reside outside its own area. The liability for loss which falls on the supplying authority can be made good either by an equal price to all consumers, to yield a profit; or higher prices to the extra-municipal consumers. Both these methods, which are not mutually exclusive, are practised.

Thirdly, local authorities are much influenced by the belief that municipal credit benefits the undertakings by enabling them to save on the rate of interest on their loans, by as much, it has been commonly alleged, as 1½ per cent. This view of the matter, together with the hope of improving the general financial situation of the local authority, ruled the situation until 1919. Thenceforward, local authorities by local Acts or by the force of certain general statutes began to be restricted in the extent to which they could aid the rates. The policy was evolved between 1920 and 1930 by Parliament itself, through the Local Legislation Committee of the House under the chairmanship of Sir Thomas Robinson.[2]

The local Acts relating to water supply have established the following situation in many (but by no means all) authorities. The surplus in any year after the necessary provision for the working expenses and loan charges of the undertaking must be applied to reduce the water rates and charges, and must not be carried to the credit of the rate funds. In some cases provision has been made for a contribution to a reserve fund or for a small balance to be carried forward before calculation of the amount to be applied in reduction of water rates and charges. But the appropriation for reserve has been limited

---

[1] Some relic of this view must have influenced the Oldham Corporation to have contravened the terms of its own local act of 1925, for it took out of its reserve funds from gas, water, and electricity, £5,000 each to construct and repair roads and services to assist in relief of unemployment. *Attorney-General* v. *Oldham Corporation*, July 1936.

[2]

Barnsley Corporation ..	.. 1923	Bridgwater Corporation	.. 1928
Chesterfield Corporation	.. 1923	Windermere U.D.C.	.. 1929
Bexhill Corporation ..	.. 1925	Milford Haven U.D.C.	.. 1930
Matlocks U.D.C. ..	.. 1927	Seaton U.D.C. ..	.. 1931
Exeter Corporation ..	.. 1928		

either by the prescription of the maximum amount of the fund or in some cases the usual contribution.[1]

In the case of gas undertakings, again, local authorities are sometimes restricted from applying any surplus profits in reduction of rates. This restriction is usually embodied in a gas order, made by the Board of Trade, though it may be incorporated in the act of the local authority.[2]

The clauses controlling the application of revenue vary. Some Orders contain only a provision to the effect that if in any year the receipts of the undertaking exceed the expenditure, the council may apply out of the general rate fund a sum not exceeding the amount of such excess surplus revenue, (1) in reduction of capital moneys borrowed for the undertaking and (2) for constructional work of the undertaking.[3] Others have the following additional provision:[4]

> "If in respect of any financial year the receipts of the Council on account of the revenue of the undertaking as shown in the accounts of the undertaking pursuant to section 20 (Accounts of Undertaking) of this Order shall exceed the aggregate of the moneys paid or expended for the several purposes mentioned in paragraphs (*a*) to (*f*) of subsection (I) of that section then—
>
> (*a*) If the reserve fund in respect of the undertaking does not amount to more than one-twentieth of the aggregate capital expended for the time being upon the undertaking the charges which would otherwise have been made for gas supplied by the Council during the next following year shall be reduced by such amount or respective amounts as will as nearly as reasonably practicable be equivalent in the aggregate to the said excess;
>
> (*b*) If the said reserve fund amounts to more than one-twentieth of the said aggregate capital the Council shall fix such amount as they may think fit (not being less in any case in which the said excess is more than a sum equal to one and a half per centum of the outstanding debt of the undertaking than the difference between that sum and the said excess) and the charges which would otherwise have been made for gas supplied by the Council during the next following year shall be reduced by such amount or respective amounts as will as nearly as reasonably practicable be equivalent in the aggregate to the amount so fixed."

The general effect of this legislation is that the charges should be so regulated as not to incur a loss or profit.

---

[1] Cf. Michael and Will, *Law Relating to Gas and Water*, vol. ii, 8th ed., 1935, p. 44.

[2] Llandudno U.D.C. Act, 1928.

[3] The Lymm Gas Order, S.R. & O. 703, 1938.

[4] The Rothwell (Northampton) Gas Order, S.R. & O. 712, 1938, s. 22.

Special provision is also made for separate accounts to be kept, distinguishing capital from revenue account:[1]

> "The Council shall keep separate accounts of the undertaking and in such accounts shall distinguish capital from revenue and as to revenue shall show under a separate heading or division on the one side all receipts in respect of the undertaking (including the interest and other annual proceeds in respect of moneys forming part of any fund for the redemption of debt in connection with the undertaking or of the reserve fund in connection with the undertaking) and on the other side all expenditure in respect of the undertaking such expenditure being divided so as also to show in each case the amounts representing—
>
> (*a*) the working and establishment expenses and cost of maintenance of the undertaking;
> (*b*) the interest on moneys borrowed by the Council for the purpose of or connected with the undertaking or used for those purposes in pursuance of the last preceding section of this Order;
> (*c*) the requisite appropriations instalments or sinking fund payments in respect of moneys borrowed or used as aforesaid:
> (*d*) all other expenses (if any) of the undertaking properly chargeable to revenue;
> (*e*) the amount (if any) credited to the reserve fund provided in pursuance of section 23 (Reserve Fund) of this Order;
> (*f*) any money expended or applied for any of the purposes mentioned in the next ensuing section of this Order.
>
> (2) The Council shall show in their accounts relating to the undertaking all items (including receipts and payments in respect of loans applicable thereto) which ought to be entered therein in order to show the financial position of the undertaking.
>
> (3) The Council shall so far as reasonably practicable apportion or carry to the accounts of the undertaking any receipts credits payments and liabilities which from time to time ought to be so apportioned or carried."

While the majority of local authorities operate without restrictions such as those mentioned, since most came into existence before 1919, the actual tendency of the law is of much influence. The view is gradually gaining ground that there ought to be first, provision to develop the undertaking, "to plough back" as the saying goes, and only then ought the remainder to be available for allocation to the benefit of rates. On the whole, the managing officials are more favourable than the councillors to "ploughing back." The latter usually think as ratepayers, and either want their rates reduced, if they are egoistic (and happen to be small consumers of the utilities in comparison with the rates they pay), or, if they are philanthropic, they want a bigger supply of money for the social services. The Council as a whole is usually stronger for rate aid than the committeemen concerned with a successful undertaking. Here are two typical expressions from officials.

---

[1] The Rothwell (Northampton) Gas Order, op. cit., s. 20.

Mr. Foden, former Financial Controller, Manchester Electricity Department, "notes with pleasure the fall in rate aid," and says, "the best services municipal electricity supply can render are to sell as near to cost as is reasonably safe to attract rateable value by the supply, and to hasten the day when electricity consumers and ratepayers are practically the same body."[1] Further, Mr. C. Owen Silvers, Manager, Wolverhampton Corporation Transport, emphasized as an ideal to be attained this resolution: "The Council (of the Municipal Tramways and Transport Association) have laid down (1920) the sound financial proposition, with which the Ministry of Transport do not disagree, that this industry should be self-supporting, that it should not be subsidized by compulsory local taxation, and therefore that the rider should pay the cost of the ride in the fare charged."[2]

It is becoming more clearly realized that a policy of making profits may result in some undesirable practices. There may be a skimping on the development of the "service" side of the undertaking; an unduly harsh rejection of requests for transport on routes not thickly populated; or the pressure and purity of the water and gas supply may be kept low. The pursuit of profits is apt to lead to accountancy juggling, and over-optimistic valuation of assets. In one case which reached the Law Courts it was alleged in evidence that goods which should have been charged for in the following year were charged to this by the officials in order to reduce optimistic accounts and so avoid appropriations in aid of rates by the Committee.

The maximum rate aid usually suggested in argument is calculated in terms of the benefit which the undertakings are supposed to derive from the credit of the municipality, generally reckoned at a rate of interest of 1½ per cent. Of course, local authorities raise their money, owing to the legal and practical security of the rates and revenues, at an interest lower than private firms. The chapter on the legal framework of local authorities showed that local acts are developing in this direction; and, further, the Electricity Supply Act of 1926 puts rate aid second in order to the creation of reserves. There is a particular cause for this development in gas and electricity: the remarkable growth of competition between the two industries, whether both in the hands of the local authority or not. The challenge has come partly from the development of technique, and new techniques, again, have been developed partly as a result of the competition. In a situation of rapid development the local undertakings are strongly tempted to reinvest their surpluses in their enterprises. For example, in July 1931, the East Ham Electricity Department discussed the question of the distribution of the surplus, holding that the benefit of the profits belongs primarily to the consumer in

---

[1] Loc. cit.

[2] Presidential Address to the M.T.T.A., 1937.

ELECTRICITY SALES AND RATE AID

CERTAIN TOWNS, 1937–38

Authority	Units sold (excluding bulk supply)	Price received	Rate aid from undertaking	Average per unit sold of	
				Price received	Rate aid from undertaking
	Thousands	£	£	d.	d.
Leeds	254,989	988,384	13,818	0·93	0·013
Nottingham	143,901	782,383	24,500	1·30	0·041
Cardiff	131,529	427,314	14,626	0·78	0·027
Doncaster	34,056	156,366	10,000	1·10	0·070
Harrogate	23,192	150,614	7,785	1·56	0·081
Shrewsbury	5,639	44,495	1,300	1·89	0·055
Basingstoke	5,595	40,278	450	1·73	0·019
Aberdare	4,117	37,701	1,000	2·20	0·058

SOURCE: Annual Report of the Electricity Commissioners.

GAS SALES AND RATE AID

CERTAIN TOWNS, 1937–38

Authority	Sales in thousand cubic feet	Price received	Rate aid from undertaking	Average per 1,000 cubic feet sold of	
				Price received	Rate aid from undertaking
		£	£	d.	d.
Leeds	3,098,919	775,263	9,885	62	0·8
Nottingham	2,806,060	595,865	31,500	51	2·7
Burnley	958,235	156,581	6,000	39	1·5
Stafford	363,407	71,065	2,000	47	1·3
Darwen	182,879	41,040	3,000	54	3·9
Hindley	77,179	19,618	535	61	1·7
Pontefract	72,582	23,233	700	80	2·3

SOURCE: Returns relating to Gas Undertakings.

the form of lower charges, not to the mass of ratepayers generally, many of whom never use current. East Ham therefore adopts a policy, which is becoming very common, of applying only a percentage of the surplus to rate relief, and devoting the rest to reserves, development and lowered tariffs. (One effect of the argument about the cheaper terms of borrowing for local authorities compared with non-municipal public utilities, and certainly one effect of the stipulation in the Electricity Supply Act of 1926 is, that as the loan is repaid, a smaller and smaller amount would be assignable from surplus to rates.) Some authorities (e.g. Southport) have adopted the rule that all undertakings shall pay the same amount to the rates as is legal in the case of the electricity undertaking: hence this becomes an all-round limitation. It has been alleged that some local authorities have attempted to circumvent the provisions of the Act of 1926 by making unduly low charges for tramways and public lighting, by increasing the assessment for rates, and by bringing into the loan account items formerly charged to revenue!

The kind of issues which local authorities have to weigh may be illustrated by some examples. In 1930 Wolverhampton had a surplus of £9,305 on electricity. The Electricity Committee proposed a sum of £6,090 to aid the rates. An amendment was proposed requiring that a substantial amount of profits be returned to the consumers at a special discount as the Electricity Department already had a large reserve, reduced charges would assist local industry in foreign competition, and that it was better to assist industry than to reduce debt. The view that prevailed, in favour of rate aid, was that the Council would in the near future need money to change the supply system and replace consumers' apparatus. In Hull, in the same year, the electricity undertaking made a profit of £36,000. It was proposed to put £9,900 to rate relief, equalling 1½ per cent on the outstanding capital, and equal to a rate of 1½d. in the £. The argument in favour was the greater cheapness of capital charges to local authorities than private enterprise. But the Committee decided against the proposal, arguing that the corporation ought to supply electricity at the cheapest possible rate, and had no right to make a profit at all. In the same city, in 1937, argument during discussions regarding the conversion of the transport system from trams to omnibuses elicited the information that in thirty-eight years the tramways had contributed about £277,000 as rate aid. It was said that if one-half this amount had been put to reserve the very heavy burden on the new transport system would have been avoided.

The gas industry (i.e. private and municipal enterprises together) complains that it is neither fair nor efficient to assign profits to the relief of rates. It argues that when the Clauses Acts of 1847 and 1871 were passed, the consumer needed special protection as gas was a monopoly, but that since then gas has become subject to competition from other fuels like oil, petrol, electricity, and grates, coal and coke have been improved, and, therefore, funds are all the more necessary to meet this competition. In fact, the aid for rates from gas undertakings is now restricted in contemporary private Acts or special Orders to 1½ per cent of the net outstanding debt. Birmingham, which originally took special powers to transfer surpluses to the aid of rates, actually obtained a clause in the Corporation's Act of 1929 providing that the charges of gas, shall, after March 31, 1933, be not more than sufficient, as far as can be estimated, to enable the undertaking to be carried on without loss. In the year ending March 1933, the amount transferred to rates was £35,000. Such a sum would make possible appreciable reductions for domestic and industrial consumers. It should be noticed that Birmingham was by no means anxious to lose the power to apply gas profits in aid of rates; it was compelled to conform with the new Parliamentary policy.

Policy, as the statistics reveal, varies much among the different authorities, though it is interesting to observe that the trend is steadily to give a decreasing amount to the aid of rates.[1] Probably the more rational view is that which is formulated by Carson Roberts and adopted by the more intelligent of the local authorities, namely, not to transfer profits to rates before reasonable reserves and working balances have been compiled. It will be seen from a comparison of rate aid and the relationship of reserves to capital that this principle is being more and more applied. One point which causes serious heartburning is that where one undertaking has made a profit and part of this goes in relief of rates, such transfer of surplus may (since the local authority is required to balance its budget) be a roundabout subsidy to an undertaking which is losing.

If this policy of mutual help were deliberately accepted as part of a principle of price-differentiation, for example, to further the consumption of water by a grant-in-aid from the electricity under-

---

[1] It is interesting to observe that the smaller authorities, that is non-county boroughs and urban districts, have the highest percentage of subsidy *from* the rates.

MUNICIPAL TRADING SERVICES

NET TRANSFERS TO OR FROM RATE ACCOUNTS FOR CERTAIN YEARS

In this table figures in *italic* type represent deficiencies made up out of rates. Figures in roman type represent surpluses appropriated to the relief of rates.

Undertakings	Net transfers to or from rates in pounds						
	1919–20	1924–25	1929–30	1933–34	1934–35	1935–36	1936–37
	(i) *County Boroughs, Non-County Boroughs and Urban Districts*						
Water	*1,094,559*	*783,746*	*561,567*	*677,015*	*594,582*	*565,080*	*565,475*
Gas	114,927	187,710	161,440	113,889	106,486	64,329	64,776
Electricity	116,647	571,260	411,899	462,109	553,595	446,136	507,599
Transport	403,104	*4,410*	*8,525*	*188,659*	1,556	84,861	110,243
NET TOTAL OF FOUR SERVICES ..	*459,881*	*29,186*	3,274	*289,676*	67,055	30,246	117,143
	(ii) *County Boroughs*						
Water	*485,634*	*290,507*	*115,995*	*242,860*	*218,652*	*242,411*	*258,294*
Gas	130,704	182,217	146,196	125,096	97,876	68,400	59,285
Electricity	148,316	458,997	346,676	378,118	460,645	341,953	390,392
Transport	479,645	116,055	109,210	*113,642*	27,565	102,363	104,902
NET TOTAL OF FOUR SERVICES ..	263,031	466,762	486,087	146,712	367,434	270,305	296,285

(iii) *Non-County Boroughs*

Water	*242,083*	*160,995*	*115,028*	*104,734*	*80,404*	*66,066*	*63,213*
Gas	52,240	16,404	18,332	4,530	8,307	6,630	16,562
Electricity	12,447	46,955	59,698	74,652	79,728	86,564	97,748
Transport	*24,039*	*38,418*	*42,523*	*31,374*	8,793	20,915	35,478
NET TOTAL OF FOUR SERVICES ..	*201,435*	*136,054*	*79,521*	*56,926*	16,424	48,043	86,575

(iv) *Urban Districts*

Water	*356,842*	*332,244*	*330,544*	*329,421*	*295,526*	*256,603*	*243,968*
Gas	*68,017*	*10,911*	*3,088*	*15,737*	303	*10,701*	*11,071*
Electricity	*44,116*	65,308	5,525	9,339	13,222	17,619	19,459
Transport	*52,502*	*82,047*	*75,212*	*43,643*	*34,802*	*38,417*	*30,137*
NET TOTAL OF FOUR SERVICES ..	*521,477*	*359,894*	*403,319*	*379,462*	*316,803*	*288,102*	*265,717*

SOURCE: Annual Local Taxation Returns.

MUNICIPAL TRADING SERVICES

THE TREND OF RATE AID

In this table figures in *italic* type represent deficiencies made up out of rates. Figures in roman type represent surpluses appropriated to the relief of rates.

Undertaking and type of authority	Net transfers to or from rate accounts as percentages of total trading receipts						
	1919–20	1924–25	1929–30	1933–34	1934–35	1935–36	1936–37
WATER							
County Boroughs	*9·9*	*4·2*	*1·4*	*2·7*	*2·4*	*2·7*	*2·8*
Non-County Boroughs ..	*22·4*	*10·6*	*5·9*	*4·9*	*3·6*	*3·1*	*2·8*
Urban Districts	*38·7*	*28·1*	*17·2*	*16·2*	*14·3*	*14·6*	*13·4*
Total	*15·7*	*8·0*	*4·6*	*5·1*	*4·4*	*4·3*	*4·3*
GAS							
County Boroughs	1·0	1·5	1·2	1·1	0·8	0·6	0·5
Non-County Boroughs ..	2·1	0·6	0·7	0·2	0·3	0·2	0·5
Urban Districts	*3·4*	*0·5*	*0·1*	*0·7*	N	*0·5*	*0·5*
Total	0·7	1·1	0·9	0·7	0·6	0·4	0·4

ELECTRICITY							
County Boroughs	1·4	3·0	1·7	1·5	1·7	1·2	1·2
Non-County Boroughs ..	0·7	1·6	1·2	1·0	0·9	0·9	0·9
Urban Districts	*3·6*	3·3	0·2	0·4	0·5	0·6	0·7
Total	0·8	2·8	1·5	1·3	1·5	1·1	1·1
TRANSPORT							
County Boroughs	3·3	0·7	0·5	*0·6*	0·1	0·5	0·5
Non-County Boroughs ..	*4·0*	*4·2*	*3·2*	*2·6*	0·7	1·7	2·8
Urban Districts	*8·3*	*17·1*	*14·1*	*14·8*	*13·3*	*18·4*	*15·0*
Total	2·5	*N*	*N*	*0·9*	N	0·4	0·4
NET TOTAL OF FOUR SERVICES							
County Boroughs	0·6	0·9	0·8	0·2	0·5	0·5	0·4
Non-County Boroughs ..	*3·4*	*1·7*	*0·7*	*0·4*	0·1	0·3	0·5
Urban Districts	*10·9*	*6·2*	*5·4*	*5·3*	*4·4*	*4·2*	*3·7*
Total	*0·9*	*N*	N	*0·3*	0·1	N	N

N or *N* represents less than 0·05 per cent.

SOURCE: Computed from the tables of Trading Receipts and Rate Transfers abstracted from the Annual Local Taxation Returns.

taking,[1] or to provide specially cheap fares to the local authorities' housing estates out of the proceeds of gas undertaking, it could be argued on its merits. But since a price-differentiation policy is on the whole better implemented through taxation of the universal ability to pay, and not merely of the special consuming body of one particular commodity, it is economically better, as well as administratively more above-board, to proceed by raising the rates rather than mulcting the undertakings. It may appear to be easier electorally to carry the former rather than the latter policy, but sound economy and administration are favoured by the latter. A policy of subsidization of the rates from the profits ought to be carried through with a very clear vision of its implications. The least that can be done is what the Burnley Corporation did in 1933. It justified its argument that the transfer to rates was not unduly penalizing the consumers by a careful comparison of the prices for gas, water, and electricity, charged in several neighbouring places. The demontration that Burnley's charges were lower, it was argued, indicated that the surpluses were not being obtained by exorbitant charges but earned by efficient and capable administration.

It might be observed that a full assessment to local rates of the undertakings, though weighing on the consumer, assists the ratepayers; it also reduces the Income Tax payable on the profits of undertakings. Often, however, Councils stubbornly reject full assessment because the rate-charge results in smaller visible profits.

A few observations are apposite here on the interpretation of statistics of profit and loss, in addition to the remarks made in Chapter Two.

The *extent* of profits or losses in municipal trading is sometimes the result of errors in estimation; but the substantial proportions thereof are governed by policy.

Where the policy is to supply at cost price, estimates of tariff yields and operating expenses may be cut so fine as to result in losses, or conversely may be so conservatively estimated by revenue or so liberally covered by the budget for expenditure, that there is a profit. Following the policy that some profit would be taken into account in the fixation of the tariffs for the next year, and correspondingly if there were a loss, the tariff might have been stiffened. In these days of the growth of electricity consumption, the tariffs might have to be maintained where with no deficit brought forward from the previous year, the tariff could have been brought down a little more than in the circumstances was then possible.

---

[1] By the Electric Lighting (Scotland) Act, 1890, *Scottish* local authorities acquired power to meet the financial losses on electricity undertakings by profits from gas undertakings. How unfairly such a provision work to gas consumers may be seen from the example of Paisley where altogether £34,000 was paid over. The sum paid in 1920 was about £13,500—and meant an increase of 9d. per thousand cub. ft. *Memorandum*, National Gas Council to Committees on Fuel and Power, 1929, p. 38.

In the field of gas and electricity, a constant policy of deficiencies is non-existent. It could not be defended in Council meetings. It would be criticized by the Ministry of Health and the Electricity Commissioners, when sanctions to loans, for instance, are sought. It would be severely handled by Parliament in any private Bill proceedings.

In the tramways, trolley-bus, and petrol-bus services, a loss-making policy is not uncommon. It may be expressed either in a total loss on the undertaking, requiring a subsidy from the rates, or it may be a partial loss, represented by services on routes unprofitable but deemed to be fulfilling a public purpose or meeting an essential public need. A tramways undertaking may not be able to hold its own with competing transport, even with an attractive fare. There are cases where deficiencies on this type of service are unavoidable, where the circumstances command public support, and do not incur official or Parliamentary condemnation.

As the figures show, the most common instance of a public utility undertaking managed upon a policy of losses and rate subsidies is the water supply. As we explain in the chapter on charges for water supply, water is regarded as essential for public health and other purposes. Finally, however, one cannot entirely rule out actual miscalculations of possible results due to errors in prediction of (*a*) consumption and sales, and therefore income, (*b*) underestimation of costs of production. In the latter category, a time of rapid economic change can be disconcerting. At the present moment (July 1939) the price of coal, steel, oil, and other basic commodities is being influenced greatly, partly by the national determination to see that the miner receives his proper due, and partly by armament operations. Prices have had to be smartly changed to make accounts balance.

PART TWO

ADMINISTRATIVE ORGANIZATION AND PERSONNEL

Chapter 9. Administrative Organization
,, 10. Personnel: Technical and Administrative
,, 11. Personnel: Manual Workers

Chapter Nine

ADMINISTRATIVE ORGANIZATION

ADMINISTRATIVE ORGANIZATION

The main questions of administrative organization are (1) the relationship between the ratepayers and the Council, (2) the authority and organization of the Council to administer these trading powers, (3) the relationship between the councillors and the public and the expert chiefs of the trading departments, (4) the problem of co-ordination within the Council's administration, and (5) coupled with this, but going beyond it, the problem of internal financial control. When these questions have been answered, the way will be clear for a discussion of what may in general be termed the employment and labour policy of the municipalities.

THE COUNCILS

The Councils of local authorities are vested with the power of deliberation, resolution, and execution. They are elected for three years, and either completely renewed triennially or re-elected by thirds every year. In other words, the first and fundamental element in the quality of the municipal undertaking is the electorate. An elected Council cannot forget the interests of the consumers, because its consumers are part of the electorate. But it may, as we have indicated in the chapter of *Rate Aid and Profits*, think rather of the electorate than the consumers, and there are other aspects of this dual loyalty which will become apparent in the ensuing discussion.

Elections are conducted frequently on party lines, but just as frequently by associations which, though having a constitution separate from political parties, may be affiliated spiritually to them and are most usually connected with them by common personal membership. Frequent mention, for example, is heard of Ratepayers' Associations, Citizens' Unions, Chambers of Commerce, Industrial Development Associations. Elections usually revolve not around the trading services themselves, but the general issue of more or less expenditure of higher or lower rates. Occasionally, when some burning question or local scandal has arisen regarding the trams or buses or electric light or the charge for gas, or contaminated water supply, or when there is an allegation of corrupt practice by an official or a councillor, there is a fierce discussion of municipal trade. Thus controversy was violent in Croydon in 1937 and 1938, and in Southport in 1938 and 1939, in the former case revolving around the outbreak of typhoid, in the latter around the supply of impure gas of a calorific value lower than declared. But the issues more often centre on such matters as the raising or lowering of the fare for or the abandonment of a particular stage on the trams, or whether the route to the chapel or the church or the housing estate or the High Street or the local baths and wash-houses shall be maintained with greater frequency and lesser charge. Will it be possible, for example, with more buses and a speedier service for people to get home to lunch? Promises are made, and sometimes exacted, from the candidates in the wards especially affected. Or groups of tradesmen exert pressure on their friends to see that the electricity and gas charges for shops or small factories shall be reduced. But these special verbal engagements do not settle the issue of the election or the policy of the undertakings in more than an extremely minor degree. Matters are settled less by particular promises than by the general social situation and outlook, largely dependent on the economic and social structure of the particular town. This determines the kind of men chosen and the nature of their policy. Nor need there be any substantial fear that employees can control councillors.[1]

Popular election produces and maintains a direct, keen feeling of responsibility of the councillors towards the needs and claims of the citizens. This sense of responsibility is, in general, exacting. It means not that all, but a majority of the Council will always, in good faith, seek the satisfaction of the whole body of citizens. Of course it does not exclude a want of knowledge and wisdom. But that deficiency is, as we shall see, taken care of by other arrangements of the organization. It does not exclude the possibility of occasional faulty judgment. Nor does it exclude instances of individual self-

Place	*Local Government Electorate*	*Total Employees in Undertakings*
Stoke-on-Trent	128,623	776
Portsmouth	116,000	2,006
Ipswich	48,000	906
Manchester	357,000	13,887
Burnley	48,063	630
Nottingham	139,731	4,004
Coventry	113,962	2,917
Birmingham	519,381	16,200

seeking, or class or group egoism and policy. But in the main, vastly overriding such deficiencies, the democratic, municipal sense of responsibility is sound and wholesome, that is, it is continuously concerned to secure the maximum service for the locality with the minimum of expense. This service is voluntary and gratuitous.[1] If anything, the sense of responsibility *for saving the authority from losses* is slightly too deep for the taking of risks.

It is interesting and necessary to consider two factors, the type of people who get elected to local Councils, and those who get appointed to the Trading Committees. Of course the two, in social composition though not in number, are almost coincident. Sir James Marchant has made an analysis of the former factor,[2] and though his figures are to some degree rendered less valuable for the present purpose by the inclusion of particulars from the counties, which are not trading authorities, the results of a large representative sample of 92 out of 338 authorities are significant enough. He says:

> "Of the 3,105 councillors some 1,800 are tradesmen, 1,148 may be called professional, and 157 are women (129 married, 28 spinsters). Of individual trades builders (almost all generally regarded as small) top the list with 199; to these we should add 19 architects and 93 sanitary and similar engineers. Next come 173 house, estate, and insurance agents; then come 750 grocers, butchers, fishmongers, bakers, caterers of various kinds, ironmongers, printers, with 215 described as 'company directors,' mostly of trading concerns of a similar character. There follows a block of 215 artisans of various manual trades, including gas, transport, and electric employees. It is perhaps surprising to find, in addition, 171 railway employees—chiefly clerks and guards. One hundred and fifty are described as 'gentlemen,' Manchester and Liverpool providing the larger number. There are 115 'retired'—elderly men from Army and Civil Service. Agriculture shows 49; doctors, dentists, and chemists 87; trade union and similar officials 91, policemen 11, magistrates (local J.P.s), clergy 13, accountants, solicitors, clerks, and retired barristers 244, retired schoolmasters 31; the remainder being various kinds of agents—colliery, shipping, stock, etc.; with a few journalists, hairdressers, motor-men, and one undertaker, one musician, one pawn-broker, one artist, and three sculptors."

We now give some examples from the replies to our own questionnaire.

---

[1] It is not necessary to make too much of the fact that there is no such thing in municipal enterprise as the fees paid to the directors on the board of a company running such utilities. Yet the magnitude of this saving is substantial.

[2] *The Times*, October 20, 1937.

A city of 290,000 *population:*

PASSENGER TRANSPORT

2 Manufacturers
2 Motor Engineers
Lace Manufacturer
Builder
Stockbroker
Civil Servant (Retired)
Architect
Tailor
Confectioner
Tyre Manufacturer
Railwayman
Railway Clerk

GAS

Land Agent
Dentist
Stockbroker
Plumber
Confectioner
2 Trade Union Officials
Married Woman
Tea Merchant
Motor Engineer
Manufacturer
Sheet Metal Worker
Tyre Manufacturer
Lace Manufacturer.

WATER

Motor Engineer
4 Builders
Retired Engine Driver
Retired Hardware Dealer
2 Trade Union Officials
Solicitor
Plumber
Dairyman

ELECTRICITY

Solicitor
Motor Engineer
Company Director
Stockbroker
Retired Civil Servant
2 Builders
Retired Trade Union Secretary
2 Lace Manufacturers
Tea Merchant
Tyre Factor
Insurance Agent

A city of 39,000 *population:*

WATER COMMITTEE

Assistant Stationmaster
Coal Factor
Garage Owner
Mineral Water Manufacturer
Insurance Collector
Master Printer
Storekeeper
Co-operative Society Secretary
Furniture Remover
Manager Billposting Company
Proprietor Furnishing Stores
Retired Builder

An Urban District of 24,000 *population:*

WATER COMMITTEE

Colliery Manager
4 Colliery Officials
2 Coal Miners
2 Schoolmasters
2 Insurance Collectors
1 Estate Agent
2 Shopkeepers
1 Local Government Employee
1 Builder's Foreman
1 Haulage Contractor
1 Farmer
1 Sub-postmaster

A County Borough of 126,000 *population:*

ELECTRICITY COMMITTEE

1 Boot and Shoe Operative
3 Company Directors
1 Journalist and Economist
1 Trade Union Official
2 Railway Operatives
1 Railway Clerk
1 Factory Hand
1 Motor and Mechanical Engineer
1 Cinema Proprietor

WATER COMMITTEE

1 Trade Union Official
1 Company Director
1 Journalist and Economist
1 Retired Trade Union Official
1 Retired Gas Engineer and Manager
1 Doctor of Medicine
1 Retired School Teacher
1 Newsagent
1 Salesman
1 Brewery Manager
1 Chamber of Commerce Secretary
1 Club Steward

A County Borough of 82,000 *population:*

GAS COMMITTEE

1 Retired Insurance Agent
1 Retired Traveller
1 Fishmonger
2 Manufacturers
1 Ironworker
1 Company Director
1 Railway Clerk
1 Retired Publican

A Non-County Borough of 33,000 *population:*

GAS COMMITTEE

1 Bakery Manager
1 Blast Furnaceman
1 Brakesman
1 Checkweighman
1 Deputy Checkweighman
1 Co-operative Society Collector
1 Ironworks Erector
1 Estate Agent
1 Hotel Proprietor
1 Housewife
1 Jeweller
1 Railway Clerk
1 Retired Engineer
1 Retired Miner
1 Mining Engineer

GENERAL WORKS, WATER AND HIGHWAY COMMITTEE

Those in the opposite column, with the addition of:

2 Barristers-at-Law
1 Butcher
1 Miner
1 Railway Foreman
1 Retired Accountant
1 Retired Brick Manufacturer
1 Retired Miner

A County Borough of 69,000 *population:*

ELECTRICITY COMMITTEE

1 Wholesale and Retail Fruiterer
1 Licensed Victualler
1 Timber Merchant
1 Solicitor
2 Railway Clerks
2 Trade Union Officials
1 Stevedore
1 Painter
1 Housewife

TRANSPORT COMMITTEE

1 Wholesale and Retail Fruiterer
1 Coal and Timber Merchant
1 Solicitor
1 Railway Clerk
1 Railway Signalman
1 Loco. Driver
1 Trade Union Official
1 Painter and Decorator
1 Housewife

A Non-County Borough of 17,000 *population:*

All the members of the Council are on one Trading Committee which manages both *Electricity and Transport.*

1 Retired Quarry Owner
1 Master Painter
2 Gentlemen
1 Retired Police Sergeant
1 Wholesale Grocer
1 Taper
1 Retired Gentleman's Outfitter
1 Retired Mill Manager
1 Sanitary and Heating Engineer
1 Cotton Manufacturer
1 Builder and Contractor
1 Store-keeper
1 Clerk
1 Farmer
1 Retired Newsagent
1 Chemical Manufacturer
1 Bleacher
1 Political Agent
1 Branch Manager
1 Trade Union Secretary
1 Cotton Salesman
1 Wine and Spirit Merchant

A London Borough of 63,000 *population:*

ELECTRICITY COMMITTEE

2 Gentlemen
1 Coal Merchant
2 Married Women
1 Railway Clerk
1 Secretary
2 Assistant Foremen P.L.A.
1 Structural Engineer
1 Bricklayer
1 Electrical Engineer.
1 Painter and Paperhanger

Certain conclusions can be drawn from these figures. Most important is the *variety* of interests, experience, and outlook. It is possible to discern representatives of groups reputed to seek election for private personal gain; and others who would have a personal interest in supporting a few large consumers of gas or electricity or water, or in helping others to anticipate the Council's demands for building sites, or contracts for supplies. Even if it be argued that such people are persistent in their plans and intrigues above the vigilance with which the innocent and disinterested ought to guard the community from special exploitation, the number and variety of those without a special axe to grind is large. It is unlikely that exploitation would succeed at all; it is hardly possible for it to succeed for long. On the contrary, the spokesmen come from so many different callings and ranks that there is likely to be a mutual stimulation to consider the interests of the whole community as paramount. If there is a representative who can raise a special plea, there is another who can counter it.

Secondly, there is but a scanty representation of "working class" representatives, and members of this class—such as trade union officials and railway clerks, etc.—happen to be unusually well-schooled in local government affairs, often having had courses at W.E.A. classes. The paucity of these members means that there is hardly a danger of price discrimination or, if one likes, gas, electricity, water, and transport rebates. Some may think that this is a pity. At any rate, in the present state of the law—general and local—an eleemosynary policy could not be pursued even if there were a continuous and substantial majority. However, a slight eleemosynary element does enter into pricing, either through direct pressure of the community on the Council or through elected spokesmen on the Council and Committee.[1]

Thirdly, there is no clean-cut division on a class basis. Indeed, only forty-two County and non-County Borough Councils in the whole country are Labour, and only in another twelve had Labour over one-third of the seats.[2] Within these Councils and the rest there are group interests which operate as strongly in competition with each other as a class division might if local authorities were sovereign authorities, which they are not.

Fourthly, although there is a substantial percentage of retired persons who can give much of their time to municipal work, most are actually engaged in earning a living. This means that only casual attention can be given to the undertakings. But in many cases there is intense interest, and in total probably more attention than is given to their work by the directors of concerns of equal size. Committees meet usually once a month, and sub-committees as often, or on calls for special business. Records of attendance are made public.

---

[1] Cf. Chapters 16–20, infra.

[2] They happen to be outstandingly good samples of municipal enterprise. In particular they are more than ordinarily careful about contracts and employee policy.

Something may be said about the general attitude of the various groups, though this, of course, is not deduced from the figures, but is the result of widespread and long enquiry and observation. A slightly different classification of membership of Councils and Committees can be made: the bigger industrialists, the smaller industrialists, shopkeepers and tradesmen, the Labour artisan, trade unionist and political leaders, and, finally, the miscellaneous company of professional people, teachers, accountants, solicitors, doctors, estate agents, and retired officials.

The big industrialists are not unenlightened; and, indeed, municipal enterprise was developed in its original stages largely at their prompting, because they wanted the certainty of a continuous and cheap supply of water, light, heat, power, and transport. Hence they were hostile to monopolists of commodities other than their own, and wished to be sure that the undertakings were run efficiently and with economy. Three of the best-known examples of this are Manchester, Liverpool, and Birmingham, but in most of the Northern and Midland towns the same tendency is well attested. These forces persist. Coupled with them is a sturdy sense of the dignity and obligation of public service. Here is the opportunity for social distinction, prestige, and a contribution to the public welfare. Knighthoods often follow in its train. These men quite frequently take the most generous views on the payment of their officials, not out of eleemosynary considerations, but from the view established in their own business experience that ability must be paid for, that it is better to pay more and select the best of the candidates offering themselves at any given time, and that then they should be made by proper discipline to give their best. They are not favourable to extensions of municipal enterprise, but they are strongly for the development of the utilities already in public ownership.

The smaller industrialists and shopkeepers in this, as in many other fields of social development, may not always be ideal representatives of "the public." It is extremely difficult for them to lift themselves out of the petty egoistic consideration of prices and charges as they affect their own businesses. They not infrequently begrudge the salaries of the technicians they are obliged to employ. They are not unwilling to grind the faces of those in the lower categories; their own businesses have never been able to afford the best assistance at high salaries. They have on occasion resented a developing municipal undertaking. Some of them have stood out against electricity development, and in particular have challenged the opening of showrooms, the employment of salesmen, and schemes for assisted wiring and hire-purchase. Indeed, they look upon the problem of electricity development as still one solely and mainly of cheap lighting. Yet their presence on the Council brings this benefit, that it compels the attention of their colleagues and officials if not to the amenity and development of services, at any rate to considerations of economy. Their effect is to produce a cautious and questioning frame of mind in estimation of costs and charges. They have a representative quality. Further, a proportion of them transcend their own interests.

The Labour artisan and trade union leaders are the bearers of the collectivist idea. There is a tendency among them to propose development of municipal services for their own sake, without a dominating regard to the economy of the situation. Their chief merit is to state and pursue the ideal of the public administration of basic utilities; to supply everyone with all his or her wishes at no price at all, and, if that is not achievable because there is a necessary cost of production, then to give the maximum service at a cost of production reduced to the minimum. They are nearer the large industrialist outlook regarding development and service to the consumer than the shopkeeper group. There are, of course, some who do not pursue this policy with all its implications. They think primarily of the interests of the producer, on a set conscious policy that the labourer is worthy of his hire and that the consumer ought to modify his demand to meet the staff's convenience. Some are simply sentimental about their own class, or resentful of all that the capitalists have made the workers suffer in the past. They tend, therefore, to pursue a policy of high pay, especially for the manual workers, as in Barnsley, where to cope with unemployment, the forty-seven-hour week was reduced to forty. Others are prepared to exercise favouritism in appointments and to intervene in disciplinary matters between manager and workman. Some, like Glasgow in the near past, may refuse to take bulk supplies of gas from a neighbouring company's plant, because they would rather not turn away their own municipal employees. Among the labour representatives, some are receiving unemployment assistance, and they are inclined to resent any salaries above, let us say, £150 a year. We do not wish to give the impression that these are widespread faults. They are occasional products of a tendency only, which has its merits in many other respects; and, as time goes on, the debilitating aspects of the tendency come more and more under the control of a clear, rational perception of the means in relation to the end. On the whole, the labour group are genuinely representative of the best public interests, and, owing to their trade union and political experience, shrewd administrators.

Finally, the professional group is particularly helpful on legal and accountancy questions, the accountants in particular being as a rule a tower of strength. The others divide out, sometimes on the side of the more considerable representatives, sometimes on the Labour side, but they are always important as spokesmen for their own special branches of the community. Estate agents occupy a rather difficult position.

THE COMMITTEE SYSTEM

The principal characteristic of a Local Government Council is that it is a part-time occupation. The councillors give to the affairs of the authority only the time they can spare from their private concerns. Though Council and Committee meetings are arranged in order to give them the fullest opportunity of attendance, the work of the Council is nevertheless far from being whole-time, and is intermittent. Moreover, there is considerable rotation of office: people may stand for re-election and fail, and even if there are uncontested seats available members may have lost interest or become too busy to continue.[1] The work of a Council is the work of an enormous business undertaking; to exercise a true and thorough control over even one department of a Council's work would certainly require two full days a week. Hence the limitations of the effectiveness of the Council as a whole.

Therefore, in order to introduce a minimum of controlling force, it is necessary to devolve the work of the whole Council to Committees over each main field of the Council's work. The establishment of Committees and the delegation to them of the power to manage the various departments of the Council's work, with the exception of the making of loans, the raising of a rate, and the making of a contract, is now permitted for any purpose and in any Council by the Local Government Act of 1933, Section 85. Actually, there is an extraordinary diversity in the extent of delegation of business to

---

[1] Cf. Collins, *Municipal Journal*, June 19, 1936, "Long and Short Term Council Membership," pp. 1197 ff. "It would appear that for every one member with twenty or thirty years' service, there are in an average Council, seven to ten with a record of below five years."

Trading Committees.[1] In the smaller minority of places, for example, Nottingham, Mansfield, Newcastle, Birmingham, Manchester,[2] the trading departments are practically autonomous. Here is the wording of the Mansfield Standing Orders:

> "To manage the Gas undertaking, to carry into effect the powers of the Council in relation thereto, and with power to direct summary proceedings, etc. . . . relating to matters connected with the Committee . . . All the powers of the Council so far as regards the management of the Gas, Water, and Electricity undertakings respectively on the ordinary Revenue accounts shall be delegated to such Committees."

It will be observed that there is a saving provision restricting delegation to affairs "on the ordinary revenue accounts." This provision is practically universal: it means that the plans and proposals for *capital* expenditure may be recommended, but not undertaken. Thus the Norwich Electricity Committee by the Borough's private Act of 1902 has fully delegated powers, but "shall not in every case be authorized to borrow money."[3] The approval of the Council is required after the Committees have acted.

In the majority of authorities this extent of delegation is not ceded. The reference to Committees is usually in the following form[4]: "To manage the Water undertaking of the Council, and to carry into effect the powers of the Council in relation thereto," all resolutions being subject to confirmation by the Council; or, "to consider and report to the Council on all matters relating to the execution of the provisions of the Acts. . . ."[5] The greater latitude is chiefly in the very large authorities, but this is not true by any means of all of them. Nor is an authority like Mansfield a large authority. When such delegation occurs it is supported on two grounds. Firstly, there are considerations of business energy, speed, and flexibility. Secondly, the more business delegated to Committee the less publicity is given in the early stages of proceedings, since neither public nor Press have the right to be present at Committee meetings. There is much to be said for this attitude, since the opportunity for frank independent expression of opinion is of fundamental importance in business enterprise.

---

[1] See, for example, Page, op. cit., part i; and note the references to this divergence in the course of discussion of the paper on "The Committee-man and His Duties," by the Chairman of the Nottingham Electricity Committee: *Incorporated Municipal Electrical Association*, Convention, June 1937.

[2] These places, with the exception of Mansfield, obtained their power to delegate from a local Act. Such powers of delegation are now generalized in the Act of 1933, Section 85.

[3] So also Birmingham Corporation (Consolidation) Act, 1883, Part I, Section 8.

[4] Borough of Ilkeston.

[5] Borough of Hornsey.

Whatever the extent of formal delegation, much or little, as there is much to do and little time, as the technical issues and cost of production figures and statistics of demand are complicated and decisive, Committees have usually a very wide freedom over their field. We must not be misunderstood; there is reserved to the Council by its Standing Orders or by accepted practice, the power to review, vary, approve, or quash the decision of a Trading Committee, and the power is sometimes exercised. Even if this occurs but rarely, the Council is nevertheless theoretically master, and its power of intervention has a controlling effect over both its Committee and its technical chiefs. Committee-men do not cease to be councillors. The Council intervenes especially when prices are going up; it wants to know why. When there is a surplus, and prices are to go down it is interested in which groups are to be benefited. Trading Committees sometimes log-roll in Council in common against the Finance Committee. In Leicester in April 1933, during an enquiry by the Ministry of Health (assisted by the Assessor, Mr. H. Nimmo of the Central Electricity Board) into the application of the City for the loan sanction of £126,479 for the erection of Corporation offices, it came out that the Council had overruled the proposals of the Electricity Committee for the location and erection of new showrooms. It is extremely doubtful whether the overruling was wise. The Electricity Committee, and especially its Chairman who had held office for ten years, considered the best interests of the development of their undertaking. The Council considered the economy of land purchase, and regarded the matter rather from the standpoint of other offices which did not require central location in a shopping district.

The Council stands as a last instance in relation to the Trading Committees. Normally they proceed without obstruction, delay, or reversal from it. But the possibility is always there, and this has at once an inhibitory and a corrective influence. Since they may be overruled they are obliged to be cautious and to take soundings as they go along. Since the Council is otherwise engaged, on other Committees and private affairs, they may do or omit to do all that is essential to a sound business enterprise, excepting the highly risky and unprecedented and therefore perhaps highly profitable or disastrous. The interest of the committee-men is to develop a special branch of the Council's work. They acquire an interest in this branch, and since it becomes a part of their prestige and claim to public recognition they sometimes are unwilling to face unpleasant facts and make a clean breast of mistakes. This seems to me to be the lesson of maladministration of the Gas Department at Southport, leading up to much recrimination between the Gas Committee and the Council as a whole. When the supply of gas was lower than its declared calorific value, and it had been alleged and by some admitted that the Gas Examiner had been deceived, and impure gas passed into supply, the Gas Committee were not at all anxious for an investigation of the situation by other Committees of the Council or for a public enquiry. It was most urgent to have both of these in some form or another. Such checks and balances are necessary especially in the case of a monopoly, and especially in the case of municipal monopolies where the degree of public trust is so high as compared with private companies, and where one has arrived at the last word in public control. There must be a sieve, which in the last resort will not let ineptitude or dishonesty pass or continue to pass. If this slows down enterprise, it does so not very much, and the deceleration is, on the whole, healthy. Some Councils, however, are obstinately insistent on ratifying every little detail, considering their Committees as little more than agencies of preliminary enquiry and report. Experienced observers testify to the greater and more vital sense of responsibility felt by members of Committees which are given substantial delegated authority.

The next question is the relationship between the Committees and the technicians. Experience teaches that the greatest single decision which a Committee can make is the choice of its technical chief.[1] Upon his expertness, and just as much upon his character as an administrator and vision as a business man, the solvency and service of the undertaking depends. "We appoint a manager: we expect him to manage," is a phrase and an idea general among local Committees.

---

[1] This power is delegated together with other powers either completely or subject to ratification before action as already described to the Trading Committees. For example, in Burnley, the Water, Gas, and Electricity Committees "have the management, superintendence and control" of the undertaking, and then in the General Instructions to Committees the latter are given power "to appoint and control the officers, assistants, servants, and workmen of their respective departments, and to fix . . . their salaries, wages, and allowances, to determine the security to be taken from each, and, to assign their duties and determine the conditions of their respective departments" (Standing Orders). Whether the power of appointment is almost plenary like this, or is dependent upon ratification, the appropriate Committee is the deciding factor in the selection from the available candidates.

Two factors are involved—the range of duties devolved to Committee, and the statement of the responsibilities of the official. To understand this it is necessary to reproduce the actual form used in both these cases, and then to make some generalizations as to actual practice. Here, then, is the statement of duties of the Gas Committee of the County Borough of Birkenhead:

> "1. To execute such of the powers and provisions of the Birkenhead Corporation Acts as relate to the gas undertaking of the Corporation, and also any Act or Acts passed or to be passed for altering, enlarging, or amending the above Acts, or any of them, so far as the same relate to gas, the Gas Undertakings Acts, 1920 to 1934, and such other Acts and Provisional Orders relating to gas as affect the Corporation.
>
> 2. To manage and regulate the gas undertaking of the Corporation, except so far as the same is controlled by the Finance Committee as regards financial matters.
>
> 3. To control the supply of gas within the limits supplied by the Corporation, and to submit to the Council when necessary, reports thereon.
>
> 4. To frame Bye-laws and Regulations for the approval of the Council under any Act or Acts of Parliament authorising the same for carrying into effect any of the foregoing duties, and to institute and prosecute proceedings in respect of the breach of any Bye-law or Bye-laws, Regulation or Regulations, or the provisions of any Act of Parliament now in force in the Borough or hereafter to be made or passed relating to matters delegated to the Committee.
>
> 5. To take the direction and control of the Department of the Gas Engineer, and the official staff appointed by the Council to that Department.
>
> 6. To examine and certify to the Finance Committee for payment all accounts within the province of the Committee.
>
> 7. To frame estimates of income and expenditure in accordance with the Standing Orders of the Council and the directions of the Finance Committee.
>
> 8. To complete all business committed by the Council to the Gas Committee of the past year, and to execute such duties as may be allotted to the Committee in the future."

The Transport, Electricity, and Water Committees follow this almost identically, and the scope of duties of the Committees in other authorities is couched in much the same form, deviating to the more or less explicit.

The statement of the range of authority of the Manager or equivalent by whatever title known is best given by an example.

> "The successful candidate shall act as and perform the duties usually devolving upon the Borough Electrical Engineer and Manager, and shall (*inter alia*)—

(1) Be responsible for the generation of electricity at the Corporation's Power Station and the distribution of electricity throughout the area of supply and have charge of and be responsible for all works, plant, machinery, apparatus, tools, etc., of the undertaking and the conduct of the business of his department.

(2) He shall at all times advise on the best means of discharging the different duties imposed upon him where such duties involve the execution of engineering work, works of new construction, or repairs under contract, and other works belonging or appertaining to the department under his charge.

(3) He shall report to the Electricity Committee at their meetings on the state of all works under his charge, and upon any new works which he may consider it desirable to carry out.

(4) He shall take charge of the maps exhibiting the system of Electricity Mains and Apparatus in the area of supply, and all other maps or plans belonging to the Corporation which shall be entrusted to his care, and shall from time to time enter upon such maps all new Mains and Apparatus and all alterations of existing Mains and Apparatus, as they are executed, so that the maps may at all times accurately exhibit the system of Electric Mains and Apparatus. He shall also keep records of the position and other particulars of all services and connections with any other buildings."

Thus the prime responsibility and authority for every aspect of the concern in so far as there is delegation to it are placed in the Committee. A secondary and executive responsibility is then vested in the name of the Corporation through the Committee in the manager or engineer. Only practice reveals the real nature of the relationship, and practice varies tremendously from place to place. The phrase current in municipal enterprise characterizing this relationship is: "The Committee is responsible for policy while the manager is responsible for administration."

The line between the two is, of course, hazy, and a wide survey of practice reveals that it varies extraordinarily from authority to authority, according to the personal composition of the Committee and the character and quality of the manager, and also, according to local traditions regarding the relationship. This is the personal equation with a vengeance. Therefore we record typical things falling under policy and administration as seen in a wholesale survey of authorities.

In transport management, the Committee regards as "policy" such questions as whether to change over from one form of transport to another or to abandon the undertaking altogether; changes in fares; changes in the stages and stopping-places; the frequency and speed of services; concessions in fares to workmen (as compelled by law), and to old age pensioners, the blind and schoolchildren, the placing of shelters and waiting-rooms; rate aid; joint arrangements with neighbouring authorities and companies. The manager regards it as his job to show the economic effects of the policy suggested, and to urge why the policy cannot be carried out unless on his estimates of the results, or through the means dictated by technology. He will insist upon the fundamental things in the design of equipment,[1] and will want to fix the numbers and choose and direct his employees, though the appointment is made by the Committee or the Council. For, within a short time, the results will show in his figures.

Somewhat similarly in the other undertakings. As in the case of certain transport managers, so in the case of gas undertakings, there have been resignations (of Chairman of Committees also) as the result of mutual irritation and wrangling and attempts by Committees to interfere in labour policy or of chairmen to be high-handed. In the case of electricity, soliciting shopkeepers may be unconvinced and obstinate, but the curves of load-factors and price cause them to be outvoted. The Committee intervenes heavily in the matter of showrooms, salesmen, and publicity. Or again, a complaint may be made about labour discipline. The Chairman of the Committee intervenes, but some engineers give it to be understood quite firmly that complaints about being burnt or about speeding-up shall be left to them to settle. This raises the question of authority over staffs. We deal with this more conveniently in the chapter on Personnel. But it is important to observe at once that as a rule the management of staff in the day-by-day normal course of events is left to the manager, the Committee only interesting itself in ceremonial. When issues of discipline and grievances and salary and conditions arise—that is, in important matters affecting morale—there is a division of responsibility between Manager and Committee, and sometimes between Manager, Committee, and a special

---

[1] Cf. a case of combination of technical knowledge with the representation of popular feeling: "The nature of the hill up which the vehicles would have to operate called for especial care in the selection of the type of bus to be employed. Many stops up and down are inevitable on this route, and the risk of accident had to be removed. Moreover, the Committee was particularly anxious to eliminate the jerking generally inseparable from the starting of vehicles on an incline, particularly in the case of a bus. Passengers were slightly jerked even on the trams when a driver put on power before releasing his brakes, and if this jerk was magnified the success of the proposed service might be jeopardized. On such small details the revenue of a bus undertaking depends and torque-converter buses were decided upon for this service." See Report, General Manager, Burnley, Colne, Nelson Joint Board, March 31, 1938.

Staff Establishment Committee, and even the Council or some councillors may take part in these affairs.

The vast majority of Committees appreciate the service rendered by the managers, and therefore do not wantonly interfere in the planning of development and the execution of policy. They attempt to pick the best man, and then let the manager run the undertaking. The fact that there is competition between gas and electricity and between forms of transport, usually strengthens the hands of the manager.

As to this method of management in which the Committee of the Council is in the position of a board of directors, certain criticisms made by those in or connected with the undertakings as consultants or by central authorities, require sifting. It has on several occasions been brought home to us that there are difficulties owing to the change of chairman and rotation of councillors. It is true that there is a rather frequent change in the personnel of some Committees, and, what is more important, that there is even liable to be a change in the chairmanship. In some cases there is actually a Standing Order to the effect that a chairman may not hold office for more than three years: it is an "honour" which ought to "go round." Yet many chairmen are in office for nearly as long as the director of a big business, a fact considered praiseworthy by critics. On the Bradford Electricity Committee, for example, there were only 3 chairmen in 34 years. This is not uncommon. It is worth stating some further facts regarding the tenure of positions on Committees. Of 64 Committees chosen at random, chairmen served up to 3 years in 8 cases; 4 to 5 years in 15; 6 years in 11; 7 to 9 in 6; 10 years in 11; 11 to 13 years in 4; 14 to 16 years in 4; 17 to 19 in 2; and 20 years and more in 3. This includes committees of gas, water, electricity and transport undertakings lumped together. The vice-chairmanships are held for similar periods. Moreover, in several cases of short-term chairmanships and vice-chairmanships, there are records of long years of service as committee-men. As for the latter, there is a wide dispersion of terms of office, as might be expected, from one year to twenty, but averages of seven years' service are common.

Length of office may cause a loss of freshness of mind and energy. Even where the chairmanship often rotates there is no adverse effect on the major factors in the efficiency of the undertaking. At the most, especially careful investigation seems to show that frequent change of chairman is a plague to the manager who has to reinstruct the new chairman in the facts and the issues involved, and to recommence that tedious process of coaching, without which his work might be subject to ignorant and sometimes rancorous interference. The problem is more a question of bother to the manager and expenditure of time than interference with the management. There is said to be more managerial freedom in private business; and a consultant of extremely long and wide experience has informed us that owing to annoyance and pin-pricks from the chairman and members of the Committee, a large number of gas engineers in municipal employment would rather work in private enterprise—at the same rate of pay. It is certainly irritating to go back to the beginning and explain all the various new uses and potentialities of gas and the modern apparatus that goes with it, or to begin all over again to expound why a big industrial customer is allowed his gas or electricity *below* the average price, and consequently to reconstruct the argument for a policy of active promotion.

Critics, however, concede, after cross-examination, that the statistical records of the enterprise do not and cannot show any damage because, (*a*) in any case they tend to show progress in the present stage of development, and (*b*) it is impossible to state an exact relationship between management and productivity. It is often pointed out what a beneficial effect men of long experience like Alderman Sir Percival Bower, Chairman of the Electricity Committee of Birmingham, or Mr. Beale, Chairman of the Water Committee of that City, or Mr. Gledhill of the Halifax Transport Department, or Alderman Sir Peter Peacock, Chairman of the Transport Committee at Warrington, all of whom have had long years of service and are interested and well versed in their subject, may have upon the development of the enterprise. The Chairman of the Salford Gas Committee in 1931 went on as a member in 1880, became Vice-Chairman in 1890 and Chairman in 1897. He was one of the founders of the National Gas Council and was for some years Chairman of the Manchester Regional Joint Industrial Gas Council for the North-West area. The Chairman of the Birmingham Gas Committee began to serve in 1898.

Men like these have identified themselves personally with the success of the undertaking, not from the standpoint of course, of private advantage, whether of profit, power, or prestige, but out of a sense of public service. But exactly what does this mean? It means that their minds are open to the possibilities which technique can suggest for the development of their undertaking, and, that when a manager needs encouragement to make a difficult decision in a situation full of risk, they can discuss the subject intelligently, and by sympathy give him that assurance which is a very large part of the force making for business success.

It is true that managers are often annoyed and disgruntled by the persistence and the questioning of the Committee. It is true also that people are often put on to Committees by party leaders as much for their deficiencies as for their qualities. But this cannot be helped where there is social control, for it is necessary for the Committee and the Council to assert, and then attempt to harmonize, the conflicting interests according to a sense of their social weight. A capable and self-confident manager can steer his Committee in the direction which is as pleasing to him as it is satisfying to the various social demands represented on the Council. Electricity undertakings are better off than gas in this respect and gas than transport. The vagaries of the Committee due to ignorance, the waste of time through ineptitude, the lack of direct personal responsibility for decisions, electoral considerations, and their connection with price and service, are, even in the short run, kept very closely reined in to the statistics of actual results. Good men get to the top—and tend to be a permanently good influence. Alderman E. Huntsman, Chairman of the Nottingham Electricity Committees, has said of committee-men of his own acquaintance:

> "The truth is the committee-men have brought much more to the industry than they themselves are aware of. It would be a fair guess to say that on the municipal side of the industry they number at least 4,000. Everyone of this great host comes, however, usually into the work with a desire to do some public service, and that without personal advantage or reward. Each one on his entry is already familiar with some field of business activity. His mind has been sharpened in the conflict he has had to wage for himself. One must suppose that such experience has given him a measure of discernment, prudence, and judgment, which are, after all, no mean gifts."[1]

The Alderman stressed the fact that the industry was "in almost every point of it in the highest degree technical"; but argued that precisely because it was so, it was by administrative and not technical standards that the committee-man should be assessed. He wished his authority to be maintained; even though he was weak in imaginative appreciation of the immense possibilities. Even the misanthropic among the critics of municipal government inside the municipal service make exceptions and qualify their comments where the undertakings are concerned. In the end, the critic says, "On the whole, the majority of municipalities are at least as well administered as private firms of the same magnitude." The distinguished Electrical Engineer of Manchester, since retired, Mr. H. C. Lamb, made some disparaging remarks about committee-men in 1931,[1] but confuted himself by admitting that they followed the leadership of a few men who had devoted a good deal of time to learning the business—and voted the money for extensions. However, it would be desirable to maintain a greater continuity in the composition and duration of the Committees, and to cease the inclusion of people in the Committees simply because Committees have to be filled.

---

[1] Address at Convention of Institute Municipal Electrical Association, June 4, 1937.

In the light of these reflections the question of the size of Committees can only be regarded as subsidiary. Since, however, disproportionate criticism is brought to bear on municipal enterprise on this account, a few words may well be devoted to it. The size of Committees varies very much throughout the country, the lowest number met with is nine, twelve is extremely common, but there are many authorities above this number, some rising to sixteen, and others even including a score, and more. There appears to be no regular correlation between the size of the undertaking and the local authority and the number on the Trading Committee, but the tendency is for the number to decrease as the undertaking gets considerable. The fact is that in the smaller authorities the undertakings loom very large in importance in relation to the rest of the work of the authority, and so it happens that the size of Committees increases, at times to include all the members of the Council. Usually in public controversy comparison is made with the number of directors on the utility companies. These usually range between four and seven. Such a small number makes for despatch. The problem of number is largely a problem of time and impressionability of each member. Discussions are very likely to be prolix where numbers are large, because repetition occurs arising out of the self-importance of the speaker, and out of the want of realization that the particular has already been discussed and settled in a more general proposition. Where there are large numbers, also, the impact of discussion and argument is not forceful except to the few actually participating: others do not hear or do not comprehend. Hence the need for retracing the stages of the argument. But, in the end, this is not more than a question of time, and if councillors have the time, and officials the patience, the larger number does no more damage than waste time. Moreover, it must be remembered that there is a large degree of absenteeism, so that only about from one-half to three-quarters of the membership participate. The effect of the large membership is again reduced by the practice in all the larger undertakings of proceeding by sub-committees: there are usually two or three sub-committees, for example, for Accounts, Staff, Omnibus Routes, Works, Electricity Supply (specially important contracts) Contracts, the Coal Sub-Committees of the Gas Committee, etc. These are usually small, ranging in number from two or three to ten: between five and seven are very common. They are in a position to give the concentrated continuous attention to the issues necessary for the preparation of proposals and argument for submission to their parent body. Committees, of course, can re-commit their reports or vary them exactly as later discussion requires, but they are heavily in the debt of sub-committees.

---

[1] Annual Convention, I.M.E.A., 1931.

Two other matters require observation. The large number is not conducive to a high degree of individual responsibility. But this touches on the question of incentive, which must be deferred to the concluding chapter of this work. Secondly, the fact that Committees in charge of undertakings are representative of the Council and the Council representative of the electorate, makes it necessary to enlarge the number beyond that prevailing in private industry. The whole spirit and constitution of public enterprise is founded upon the attempt to avoid the mistakes of the producer: that of private enterprise is to let those fail who fail to satisfy the consumer. Whereas the control of private enterprise is a *post hoc* judgment that of public enterprise is an anticipatory control, to avoid the errors which have been seen to occur in private enterprise. This means that there is an attempt to reduce the chances of mistaken calculation of demand, and of discrimination in price as between one group of the ratepayers and the others. Therefore the constant pressure to put in *all* the spokesmen. This cannot be regarded as undesirable though its institutional organization may result in prolixity of discussion.

CO-ORDINATION

In recent years, local government journals and conferences have given considerable attention to disintegration of the work of local authorities and the possibilities of closer administrative co-ordination. Briefly, it is argued that owing to the increase in the range of local government services, specialization through Committees has become necessary, and therefore there is not and cannot be under present conditions a wide and sweeping survey of the whole field of local services to the end that their purposes and finances may be harmonized. It is, of course, essential for reasons of economy that all the expenditures of the different departments shall be looked at so far as possible by one mind, in order that no alternative distribution of expenditure could give better results.

This implies financial co-ordination of the nature to be discussed presently. But what amount of administrative co-ordination must it imply? Certainly there ought to be central purchasing. Certainly also, one ought not to find a succession of openings of the roads for electricity purposes, gas purposes, transport purposes, water purposes; and in many places that degree of co-ordination is already secured. Certainly, again, there ought to be as much common reading of meters as is technically expedient, and common collection of the charges and rates. That also is being developed quite rapidly.

Is further co-ordination urgent? It can hardly have greater application than now. Two further avenues of co-ordination might be experimented with. One is to extend the number of what might be called "liaison committee-men," that is to say, to make the members of the Committees of the undertakings members of other Committees in much fuller measure than now, to give them connections among themselves, and to bring in a stronger representation than is at present the case from among members of the Public Health, Public Assistance, Education, Highways, and Police Committees on to the Committees of the undertakings. No harm can come from this, but only good. There is the fear, of course, that such a policy would make the Committees too unwieldly in point of number, but it is more a question of ingenious adjustment than additions.

Another possibility which needs further exploration is the very difficult problem of uniting the Gas and Electricity Committees. There are very strong considerations in favour of this. If the Gas and Electricity Departments are separate, a dog-fight may occur and the wastes of competition which are deplored in private enterprise may show themselves in a surplus of staff, a miscalculation of demand, expenditure on advertisement, unprofitable expenditure on showrooms and salesmen, and an unprofitable use of the fixed capital of both the undertakings' generating plant. These things have already happened. Therefore some local authorities, chief among them Salford, Birmingham, Edinburgh, have established joint committees; Salford, a Committee on Light, Heat and Power: Birmingham, a Gas and Electricity Advisory Committee; and Edinburgh, a Public Utilities Committee which includes gas, water, transport, and electricity. In the Edinburgh experiment the Public Utilities Committee has referred and delegated to it, as a whole, the functions of the Council relating to the undertakings, and there are four standing sub-committees to which the parent Committee sub-delegates the routine conduct of the work of the departments.[1] The arrangement works satisfactorily, in that the parent Committee surveys all the undertakings and controls policy in a more continuous and co-ordinated form than the whole Council can do.

The Salford experiment was begun as the result of an enquiry undertaken in 1933.[2] The report took the view that though electricity is of supreme importance in Salford, it was all the more necessary that the Gas Department should not feel compelled to increase its capital expenditure to a dangerous extent in attempting to hold its own. It found the existing competitive situation intolerable, and that the views of the competing departments were diametrically opposed. It believed that if the two undertakings were co-ordinated in one single Committee the interests of each undertaking could be safeguarded, and it then stated the case against competition:

> "In considering this aspect of the question (the need for competition) it should be clearly borne in mind that both these undertakings belong to the ratepayers of the City, the Council itself being responsible for the successful management thereof. The ratepayers are entitled to have both undertakings administered to the best advantage. The Gas and Electricity Departments cannot be regarded as separate and distinct entities, free to develop upon whatever individual lines each may decide. Nor can those responsible for the management thereof be allowed to enter into intensive competition with one another, resulting in the useless spending of large sums of money in unremunerative propaganda work. . . . Committees of the Council, and especially Trading Committees, are apt to look at their problems solely from their own immediate point of view. It is essential to take a broad and comprehensive view and to give due consideration to all the public interests, financial and otherwise, including those of other departments of the Corporation."

It is a formidable problem; how much so is borne out by the comments of the parties to the dispute. For example, the City Electrical Engineer of Salford argues, "Electricity is now so completely competitive with gas in every major field of gas activity, that co-ordination in general policy could only be conceived as acting in restraint of development of either the one or the other form of service. If this form of co-ordination is contemplated, an effort should therefore be made to forecast which of these two agents the people of Salford will wish to use in the future for the production of light, heat, and power." Again, in 1932, competition between the Electricity and Gas Departments of Plymouth reached such a point of acrimony, that it was moved that a leaflet for the Gas Department should not be given the necessary appropriation. The Council rejected the resolution. Again, from Coventry in 1934, this report was made:[1] "Gilbertian is the term applied by the councillor to the prospective violent competition between Gas and Electricity Departments, which have established their showrooms in the new thoroughfare, Corporation Street.[2] The Gas Committee recommended that a superintendent salesman should have charge of both showrooms, but the Electricity Committee objected and the Council had different pleas to consider. Could a joint salesman serve two masters? And to whom would he be responsible? Was it not desirable that the two departments continue in reasonable rivalry? The voting ruled out the recommendation." In Manchester, the question was considered in 1933, and the Expenditure Special Committee reporting on the subject saw an advantage in amalgamation, in that action by one department irrespective of the effect on the other would be restrained; there could be an interchange of technical advice in regard to new consumption and methods of distribution; there would be a better balance of capital expenditure if the complete plans of both departments were known, and there ought to be joint meter-reading and billing. In the course of its enquiry the City had sent a questionnaire to other big cities to discover whether they suffered from difficulties arising out of competition: the answer received was that there were no difficulties. Manchester concluded by making arrangements only for joint meter-reading and billing.

---

[1] Cf. Fifth Annual Progress Report by the Public Utilities Committee, City and Royal Borough of Edinburgh, 1935.

[2] Page, op. cit.

An enquiry of our own directed to all local authorities with both Gas and Electricity Departments shows that out of sixty-three authorities answering there were separate Committees in forty-eight, nine had a joint Committee, and six had adopted the device of separate Committees with identical membership but different chairmen. This latter expedient shows a number of varieties; in some cases the Committee consisted of all the members of the Council—which is co-ordination with a vengeance. Where either a single Committee or the latter arrangement has been established, the evidence goes to show that the engineers have worked together rather well, and, in one case, Loughborough, the following opinion was expressed: "This system (a joint Committee) has been in operation for approximately four years. . . . The results have more than justified the course that was then taken. Both departments now work in perfect harmony in healthy competition, and have translated heavy losses into profits, notwithstanding substantial reductions in tariffs. I know that there is a considerable divergence of opinion on the merits of a joint committee to control the two undertakings, but, as a result of this experience, at Loughborough, I am confident that a joint Committee is preferable, *provided* its members are very carefully selected by the Council."

---

[1] *Municipal Journal*, 1934, p. 290.

[2] Showrooms for both in a single building, costing £21,500, were provided, the departments sharing the expense on an equal basis.

In 1935 the County Borough of Wallasey submitted a questionnaire to local authorities and companies managing both undertakings. The answers from the local authorities confirm our own questionnaire. They can be summed up as follows. Some authorities reported no friction and therefore no problem. Others reported some friction between the departments, but that, as it was trivial, it was easily overcome. Several others insisted on the need for separation to maintain competition and keep both "alive." In quite a number *limited* co-operation had been contrived. For example, "the undertakers were permitted to employ canvassers, to open showrooms, and each was authorized to engage in hire-purchase trading. In order, however, to eliminate unfair competition and to safeguard the Corporation against any loss which might arise on indiscriminate hire-purchase trading, which is the chief source of competition, a scheme was established whereby co-operation between the undertakings and the Treasurer's Department was secured. But competition in the laying of mains is not stopped." Again, in another city, the Electricity Department, to overcome "aggressive competition," has agreed to inform the Gas Department when customers wish to change over, in order that the case for each may be fully explained to them. In another case, there was "a kind of unwritten understanding between the two Committees to consult each other where request for supply would affect the other seriously," and an example is cited: where a big factory wants to substitute electricity for gas, involving the latter in a heavy loss.[1]

After much reflection the Wallasey Corporation decided to help its Committees separate but to request them to work in closer co-operation; to require that all contractors working in conjunction with the two departments be instructed not to circulate sales propaganda without the approval of the Town Clerk; and certain other matters of business were regulated uniformly for both departments. Mr. Larkin, the City Treasurer of Coventry, is a strong advocate of even more co-ordination of the trading undertakings. He remarks, among other things, that often their separation is merely a relic of the days when they were under private management, before being bought by the local authority. He believes, and we agree with him, that there should be a single Trading Committee. It would be advised by the Town Clerk, the Treasurer, and the General Manager of the trading undertakings. He thinks that this latter office could be held by one man for the four trading departments, and that he should be qualified in management only, in administrative and commercial ability and "not their skill in designing a tramcar or a reservoir." "Each separate department would naturally have its proper complement of technical officials, in the shape of works managers, engineers, and so on."[2]

It must be remembered that there is considerable professional emulation among the engineers and managers of the undertakings, and rivalry between their Committees. These cleavages have been fostered since World War I by the forceful policy of development of the gas industry and electrical industry. The former is marshalled and stimulated by the National Gas Council and the latter by the British Electrical Development Association; and each of these bodies, in the course of promoting the interests of its own industry by conferences, literature, and other demonstrations, stimulate continually the separatism of the local departments. The Electricity Commissioners have been exceptionally "promotional" of electricity development. The McGowan Committee, interested only in electricity, recommended (p. 87) that where gas and electricity undertakings were left under the joint ownership of a local authority, "it would assist in the more rapid development of the electricity undertaking if the authority were *required to have separate* Committees."

---

[1] An interrogation of private companies supplying both gas and electricity revealed that they also are very careful not to let each department cut the other's throat. They tend to let sleeping dogs lie—that is, if there is gas cooking not to press electric cooking. If the consumer takes the initiative, they cannot help but satisfy demand; but they do not stimulate demand in such a way as to cause expensive and risky changes. There is a pretty clear division of business, they think, into gas for cooking and heating and electricity especially for lighting. They seem to be limiting the competition in practice, and thereby introducing a new manifestation of monopoly—not price discrimination, but service discrimination.

[1] *The Financial Circular*, January 1934, p. 16. "The Financial Management of Trading Undertakings." Mr. Larkin, who speaks from long experience, returned to the charge in his address on "Electricity Distribution" at the Annual General Meeting of the I.M.T.A. in 1938.

It seems to us that in every local authority there ought to be a thorough exploration of the possibility of co-operation between the two. Certainly each undertaking ought to be left free to explore forcefully all the possibilities of getting more consumers and of exploiting new modes of consumption. Without this, invention will stagnate, and the stimulus to lower costs will be removed. It would be a matter for concern if there were arranged something like a monopoly of the two, acting in concert, because that might mean comfort and profit for the producers, but less than the advantages obtainable from the inventions for the consumers. In this case local authorities have assumed the obligations and the risks which used to be borne by private enterprise and which were manifested in the competitive process; that which most satisfied the consumer conquering the field. Hence, in the words of one spokesman of a local authority, "Being competitive services it was considered that a joint Committee would have the effect of hindering the full activities of the most progressive undertaking." Yet it is not difficult to invent expedients to maintain what is healthy in competition[1] and yet avert its evident wastes. It is possible to make them in the best sense of the word (in the phrase of one local official) "twin stars." It has been observed by many officials and councillors that no one dreams of having separate departments for trams and buses; they are all grouped under a single Committee.

Were the scope of this work wider we should have undertaken a survey of departmental organization, but it is outside our present perspective. However, some reference is made to this subject in the following chapter on Personnel.

FINANCIAL CO-ORDINATION

If there ought to be more administrative co-ordination than there is, there is even less doubt about the need of financial co-ordination. It is essential that we should consider how far the trading undertakings do and ought to come under the surveillance of the specifically financial institutions of the municipality—the Finance Committee and the Treasurer.

---

[1] See Chapter 21, infra, on "Stimulation of Demand and Service."

The law does not establish for any local authorities, excepting County Councils and the Metropolitan Boroughs, compulsory Finance Committees with the power of sanctioning the estimates and payments (above £50) of the various spending departments. Nevertheless, the practice of appointing a Finance Committee is everywhere adopted, with very rare exceptions in the case of the smallest authorities, which, in any case, rarely have trading undertakings. On several occasions, Committees of Enquiry, for example, the Departmental Committee on the Accounts of Local Authorities on 1907, and again in 1932 the Ray Committee on Local Expenditure, have expressed their sense of the necessity of such controlling Committees. Both of these bodies recommend a statutory obligation to establish Finance Committees.

The question is what such Finance Committees actually do and what they might do. Their principal duty is to review the estimates presented by the various spending departments, and to attempt to secure a reasonable relationship between the projected expenditures of all the departments, and to maintain what they regard as a reasonable relationship between the total of such expenditure and the rateable capacity of the area. Finance Committees have powers of recommendation and therefore revision of the annual estimates, which must be submitted to them by all departments, before being passed on to the Council, but they are less powerful in practice than would appear from the Standing Orders. The diversity of the methods of composition of these Committees is a direct index of the uncertainty regarding their proper function, and a demonstration of their groping for, rather than certain possession of, authority. For example, in eight out of eighty-six local authorities interrogated by Dr. Marshall,[1] *the whole Council* constituted the Finance Committee.[2] This is a clear indication that nobody thought he could trust anybody else to look after his interests unless he were present, and that everybody intended to be present to see that everybody else, like the Dutch, did not commit the fault of giving too little and asking too much. Fifty-three authorities recorded no prescribed method of selection. Three consisted of the chairmen of all the other Committees; eighteen Finance Committees consisted of all the chairmen plus other members selected in various ways; two appointed a representative from each ward; while two allowed the spending Committees to appoint a proportion of the members. Dr. Marshall says that where there is no fixed method, authorities often include in the Finance Committee those who are supposed to have specialized knowledge, such as chartered or incorporated accountants.

---

[1] *Local Authorities: Internal Financial Control*, 1936.

[2] Yet in such cases as avowedly at Blackpool, for example, the motive is to secure expedition, for when the Finance Committee has accepted a proposal it is tantamount to acceptance by the Council

Yet experience teaches that the Finance Committees have, in general, very small authority. The spending Committees are determined that they shall remain masters in their own house. There is nothing in municipal government like the Treasury in the central system of administration, enjoying at once a statutory situation and a prestige and tradition of independence and control derived from centuries of practice, and manifested by the symbolic status of the Prime Minister as First Lord of the Treasury. It has often, of course, been charged against the Treasury that it is negative and restrictive of developments properly proposed by the spending departments, and too much inclined to regard each department as exactly like the others in matters of personnel and organization. Yet no one will deny that its function is salutary.

It is most desirable that the power to revise estimates, to compare their total with the aggregate sum which it is thought proper to levy in rates in any given year, and if possible to forecast for some years ahead both rating and loan charges, should be lodged in a Finance Committee which shall be neither despotic nor powerless. This proposition is more readily accepted by municipal councillors where the department is fed by the rates and where, therefore, one claim to expenditure is the rival of another. In that case a central Finance Committee serves to overcome administrative separatism, because the power to ask, "How much?" is the power to ask for justification of the proposed services intended, to centralize a knowledge of all the resources and obligations of the Council in the future as well as the present, and to test the enthusiasm for a particular project.[1]

It is rather more difficult to argue the case for the submission of the trading undertakings to the Finance Committee, and in practice, because of their technicalities, they are largely exempt from control. It is possible to make a budget which can be adhered to throughout the year by the rate-fund services almost exactly (although deviations are sufficiently large to cause anxiety and criticism among municipal treasurers), but it is impossible to budget with rigidity for a live and developing undertaking. Moreover, the capital expenditure programme of the undertakings is less comprehensible to the Finance Committee than that of the rate-fund services, though there are notable cases of valuable intervention.

---

[1] Simon, *A City Council from within*, p. 65.

Nevertheless, there is a great deal to be said for making people explain themselves; in explaining themselves to others they achieve the extremely important and sometimes disconcerting service of explaining themselves to themselves. Nor is it a disadvantage to an enterprise to have to answer the elementary questions asked by those who know nothing about the subject. The rates may be called upon to pay for a deficiency, and the undertaking may be called upon to make an appropriation in aid of rates out of its surplus. To achieve this fairly, the Finance Committee must review the prospects of the undertaking. In any case, the charges of the trading undertakings may have an important bearing on the attraction of factories to the town, with a consequential effect upon rateable value. For example, in Warrington, industrial firms have been attracted by charges for water in special contracts at 8d. per thousand gallons.

As a matter of fact, it is very rare for Finance Committees to be called on specifically to review proposals for a variation in charges in any of the undertakings. The undertakings almost universally submit accounts or a balance sheet, and the tariffs and charges are part of the material for discussion. Again, where substantial deficiencies or surpluses arise, or where special consideration is to be given to a particular firm, the Finance Committee usually obtains a power of review or suggestion. In some places the Council is specially charged with authorizing tariff-changes, in other places there is none but a later consideration of them in Council.

Mr. Arthur Collins seems to me to make an unanswerable case (with a reservation which we make presently) when he advocates an annual review of charges.[1] He argues that the Council has the same responsibility for these services to the public as for the others; that the *total* demands on the public can be kept steadier only if all municipal charges are reviewed together; that long-term budgets are required; that where such matters are inquired into a standard of performance is set and this may provide an incentive to employees. He proposes, among other things, that charges should be reviewed and fixed annually, and that the Trading Committees should make no change in them until the Council has considered a joint recommendation from the Trading Committee and the Finance Committee. He looks to consultation between these two Committees from the outset, whenever a change is contemplated, and observes that contemporary procedure (where the Finance Committee *supervenes* after the change has been worked out by the Trading Committee) is the product of old-fashioned conditions and conventions.

---

[1] Cf. "Budgetary Control for Trading Undertakings," *Municipal Review*, 1934, pp. 287 ff.

Of course, in matters of capital development, where decisions are to be made involving loans and commitments whose burden will be felt for years, the Council will not act except upon a report from the Finance Committee. A typical example of such regulations—where a distinction is made between revenue and capital expenditure, which does not always happen—may be cited:[1] "No Committee shall incur any Capital Expenditure or recommend an application to a Government Department for borrowing powers without first submitting a detailed report thereof to the Finance Committee. For the guidance of the Finance Committee there shall be prepared a statement setting forth the annual loan charges and other annual expenditure which will be involved, together with the probable income (if any) which will be derived from the proposed capital outlay." In other authorities there is a similar stipulation regarding loans, frequently couched in the form "where the sanction of a Government department is required." Furthermore, there is a variation in the sums of money which may be spent on an item without permission of the Finance Committee: for trading undertakings large amounts, between £2,000 and £5,000, obtain this exemption.

There is no doubt whatever of the benefit to the undertaking and the consumer of such controls over financial proposals, although occasionally the shortsightedness of a Finance Committee may hamper an undertaking.[2] The examples we have given show the kind of procedure which prevails, and suggest the conditions under which the Finance Committee may help or obstruct.[3]

All boroughs and urban districts must appoint "fit persons" to be treasurer. This provision of the Local Government Act, 1933, Section 106, goes back to the Public Health Act, 1875, and the Municipal Corporation Act of 1882. There is practically everywhere a fully organized separate Finance Department. The duties of the treasurer are not comprehensively defined in any statute or Order, but his usual functions are to advise the Council on all questions affecting the finances of the local authority, to act as controller and chief accountant. Statute does place some duties upon him, of considerable significance as a controlling agent, and case law has emphasized the independence of the treasurer. This situation is summed up in the judgment of Farwell, J., in *Attorney-General* v. *de Winton*:[1] "The treasurer is not a mere servant of the Council; he owes a duty and stands in a fiduciary relation to the burgesses as a body; he is the treasurer of the borough; all payments to and out of the borough fund must be made to and by him (Sec. 142); he has to account to three auditors . . . (Sec. 25); and although he holds office during the pleasure of the Council only (Sec. 18), this does not enable him to plead the orders of the Council as the excuse for an unlawful act." The investigation made by Dr. Marshall, referred to earlier, shows a great variety of practice in regard to these functions. As regards the first, "to advise on all financial matters," seventy-three out of eighty-five authorities answered that they advised all Committees, seven all Committees except Education; two all Committees "except one or more trading undertakings"; and two all the committees except education and "one or more of the trading undertakings." The answers were practically the same to the second question, namely, the responsibility for all the financial accounts, excepting that four were responsible for all Committees "excepting one or more trading undertakings," and four all Committees except Education and "one or more trading undertakings." This is a high degree of co-ordination, though it is deplorable that even the small number of undertakings are excepted.

---

[1] Urban District of Hoylake, Standing Orders.

[2] It was alleged in the course of proceedings in the Southport Gas Case that the Finance Committee had laid down a general resolution that "no money not immediately productive or resulting in immediate economy" must be spent on the works (*Southport Guardian*, May 13, 1937, p. 7, vol. 7). The Leicester example shows that the *general* economy of or the location of other offices may well have prejudiced the development of the electricity undertaking.

[3] Where loans are pooled, the Loans Fund cannot be operated with complete efficiency unless the demands made upon it for capital expenditure are estimated comparatively at the beginning of each year.

It should be observed that the officer advises but does not dictate. The actual relationship, of course, between the treasurer and the heads of the trading undertakings varies extraordinarily from place to place. It has to be remembered that not all managers and engineers are as strong on the analysis of financial prospects as they are on technical questions and day-by-day management. Although they have mastered the economics as well as technicalities of their undertakings in their studies and through experience, there are calculations in the field of supply and demand which will require the application of another mind alongside their own.

---

[1] 1906, 2 ch. 106 (Sect. 18).

Our own view of the treasurer's position is that in addition to the surveillance or keeping of accounts, and the receipt and payment of moneys, he should be the economic expert. Every local authority needs a trained economist to advise it so that it may derive the greatest advantage from analysis of local supply and demand, the movement of the credit market, the general cycles of prosperity in the whole country, and the complex factors upon which these depend. In view of this, treasurers who already have a severe professional training established by their Institute, might make the Economics section of it far more extensive and rigorous. To see all the activities of the municipality as valid competitors on the one hand, and on the other the scarce means of the locality and the nation, and then to impress all the contending, worthy parties, with the mature view thus achieved, is possible only to those who have made economics a profound discipline.

The Incorporated Municipal Electrical Association has expressed itself[1] as hostile to the submission of the Electricity Committee to the treasurer. It was afraid that the department would lose its freedom of development. Even the enlightened Alderman Huntsman talks in one breath of "An uninformed or unsympathetic Council, many of whose members are entirely out of touch with the Committee's worth and aims" . . . and "Every Electricity Committee should have command of its own financial policy, subject only to the full Council, where that is obligatory."[2] Such views as this ought not to be entertained, and the borough treasurer should be supported by other councillors to maintain, not a dictatorial or an intrusive control, but the remaining prerogative of the British monarchy, the right to advise, the right to warn, and the right to be consulted.

As for the question of the centralization of accounts, this was emphasized by the Nottingham Gas Frauds Case of 1930.[3] The result of that case was that Nottingham changed the system of checks and balances to what it should be everywhere. As the result of an enquiry, in April 1931, the Nottingham Council arranged that all financial matters and the accounts should come under the control of the city treasurer, who would henceforth be responsible for all accounts. He would be given sufficient accountants for the purpose; there would be a system of stock accounts covering all stores and material. Receipts of goods and the prices paid for them would be verified by the Accountant's Department, and no invoices would be accepted for payment until the goods were actually received and properly checked. Moreover, the gas manager must be present at meetings of the accounts sub-committee of the Gas Committee, and of the whole Committee itself. Finally, the directions of the City Council to the Gas Committee must be fully carried out. This latter injunction was made because in the past the Gas Committee had not exercised the control over the details of the undertaking sufficiently sternly. These provisions were in general operation, and since that case have been almost universally applied.

---

[1] July 1931, *Municipal Journal*, p. 1178.

[2] This theme was again taken up at the I.M.E.A. Convention of 1939 by the Chairman of the Croydon Electricity Committee. He argued that the treasurers were too busy with other things to understand the necessities of electricity development, and Financial Committees "more concerned with the size of the suggested expenditure than the necessities of electricity supply. . . ."

[3] Cf. pp. 118–19 supra.

RECEIPTS AND PAYMENTS

As to the making of payments, there is a statutory authority (Local Government Act, 1933, Section 233, Clause 2) which imposes upon the treasurer the specific duty of receiving all moneys due from any officer unless the Council otherwise directs. Furthermore, no payment can be made without an order signed by three members of the authority, and counter-signed by the Clerk of the Council. All receipts of the Council must go to the general rate fund of the borough, and all liabilities falling to be discharged must be discharged out of that fund. Hence, it is only possible for moneys to be received or disbursed improperly, by accident or corruption, if the financial officer, the town clerk, and the three councillors are either negligent or corrupt or overworked to the point of unconsciousness or if there is any combination of these eventualities. There is at least as much care in the control of moneys going in and out as in the private business with the best systems of accountancy. The Ministry of Health has dotted the i's of this subject in its Memorandum accompanying the Accounts Regulations of 1930, and its remarks may be reproduced.

> "The Regulations do not contain any provisions which would limit the discretion of a Council in regard to the officers it employs or the duties it assigns to each. But, in view of the important bearing which wise allotment of duties has upon the efficiency, economy and security of the account keeping, it is thought desirable to refer here to the principles which appear to be of chief value in this connection.

i. That the duty of providing information, calculating, checking and recording the sums due or from the Council should be separated as completely as possible from the duty of collecting or disbursing those sums.

ii. That officers charged with the duty of examining and checking the accounts of cash transactions should not themselves be engaged in any of these transactions.

iii. That responsibility for the maintenance of current supervision of all accounts and records relating thereto should rest upon one chief financial officer, even when a separate departmental accountant is employed, as the efficiency of internal audit depends largely upon its independence. And that the officer charged with this duty of supervision should have access at any time and authority to apply any test or check to the accounts and records.

iv. That responsibility for the organization of efficient accounting systems should also rest upon this officer. But that he should in all cases consult the chief officer of the department concerned as to the form and manner of keeping any records, statements or accounts which have to be kept in that department, due regard being paid on the one hand to the provision of prompt, reliable and complete information for the preparation and verification of accounts, and on the other hand, to the avoidance of unnecessary delay or increase of cost in the execution of work."

We may conclude, therefore, generally, that with respect to the wisdom and probity of expenditures, on the whole the system adopted already is not unequal to the task assumed. There could be improvements, and they may be inferred from the standards we have set down.

Chapter Ten

PERSONNEL: TECHNICAL AND ADMINISTRATIVE

It is evident that, however zealous and capable the councillors, however well-organized the council, however well-adapted the area to the technical needs of the particular undertaking, a capable staff of officials and workmen is essential to success. For the organization necessarily falls into the creative or destructive hands of those who undertake the everyday work. It is now necessary to discuss their selection, capacity, and remuneration.

TABLE OF PERSONNEL IN CERTAIN MUNICIPAL ELECTRICITY UNDERTAKINGS, YEAR 1938–39

Name	Estimated population	Technical	Secretarial and/or administrative	Clerical (including salesmen, canvassers, collectors, meter readers, inspectors, etc.)	Manual	Total
Bromley ..	60,000	17	2	36†	192	247
Derby ..	142,403	31	10	100‡	436	577
Hampstead ..	90,690	19	53*		178–228 (according to season)	250–300 (according to season)
Ilford.. ..	167,000	22	5	139§	366	532
Newcastle-under-Lyme	61,200	3	1	13‖	14	31
West Hartlepool ..	70,100	5	3	51¶	114	173

* No separate figures were furnished.

† Including 4 Salesmen and Canvassers, and 17 Meter Readers.

‡ Including 17 Salesmen and Canvassers, Showroom Assistants, and 37 Meter Readers.

§ Including 17 Salesmen and Canvassers, and 2 Collectors and 18 Meter Readers.

‖ Including 2 Salesmen and Canvassers, and 4 Meter Readers.

¶ Including 8 Salesmen and Canvassers, Showroom Assistants, 8 Collectors, and 7 Meter Readers.

The personnel of the trading undertakings consists broadly of three co-operating classes: the technical staff, the administrative and clerical group (including the salesmen, collectors, etc.), and thirdly the manual workers. We have already indicated the total numbers employed throughout the country as a whole, but a greater sense of actuality can only be obtained by considering specific instances of undertakings. This serves to indicate the problem facing each authority.

TABLE OF PERSONNEL IN CERTAIN MUNICIPAL GAS UNDERTAKINGS, YEAR 1938–39

Name	Estimated population	Technical	Secretarial and/or administrative	Clerical (including salesmen, canvassers, collectors, meter readers, etc.)	Manual	Total
Bromley ..	60,000	6	3	52*	203	264
Darwen ..	32,280	4	2	9†	41	56
Newcastle-under-Lyme	61,200	7	2	20‡	120	149
Nottingham ..	281,850	24	5	187§	767	983
Stretford ..	68,958	15	4	96‖	284	399
West Bromwich	82,330	4	1	23¶	158	186

* Including 7 Salesmen and Canvassers, 17 Collectors, and 10 Meter Readers.
† Including 3 Salesmen and Canvassers, and 4 Meter Readers.
‡ Including 2 Salesmen and Canvassers, and 7 Collectors and Meter Readers.
§ Including 10 Salesmen and Canvassers, 50 Collectors, and 16 Meter Readers.
‖ Including 29 Salesmen and Canvassers, and 22 Collectors and Meter Readers.
¶ Including 4 Salesmen and Canvassers, 8 Collectors, and 4 Meter Readers.

TABLE OF PERSONNEL IN CERTAIN MUNICIPAL TRANSPORT UNDERTAKINGS, YEAR 1938–39

Name	Estimated population	Technical	Secretarial and/or administrative	Clerical (including inspectors, etc.)	Manual (including drivers and conductors, etc.)	Total
Darwen ..	32,280	1	1	9	71	82
Derby ..	142,403	9	3	39	594	645
Nottingham ..	281,850	1	4	87	1,654	1,746
Rawtenstall ..	28,587	1	2	7	169	179
West Hartlepool ..	70,100	2	2	16	153	173
Yarmouth ..	56,771	1	1	16*	Nil	18†

* Increase of 50 per cent in summer. † Increase in summer.

THE MANAGERS, ENGINEERS, ETC.

No law directly requires a local authority to appoint skilled technical men to manage its undertakings. But no local authority could do otherwise without the risk not merely of financial ruin but of immediate danger from explosion, floods, gas poisoning, and the rest. Local authorities generally, but not always, advertise widely for engineers and managers, and these jobs are sought for by men who have the technical qualifications obtained at the universities or technical schools. There is considerable competition for municipal situations, but the number of those who apply for the biggest jobs of all is small. There is a process of self-exclusion. Since there are a

TABLE OF PERSONNEL IN CERTAIN MUNICIPAL WATER UNDERTAKINGS, YEAR 1938–39

Name	Estimated population	Technical	Secretarial and/or adminis-trative	Clerical	Manual	Total
Birkenhead ..	145,500	8	20*		88	116
Bromley ..	60,000	4	2	6	107	119
Derby ..	142,403	3	1	15	130	149
Norwich ..	126,236	12	3	22†	57	94
Swansea ..	161,750	7	1	29	49	86

* No separate figures were furnished.

† This figure includes three Meter Readers, who are only *part-time* employees.

ELECTRICITY UNDERTAKINGS—CERTAIN LOCAL AUTHORITIES

TABLE OF PROPORTION OF SALARIES, WAGES, ETC., TO TOTAL WORKING EXPENSES IN REVENUE ACCOUNT. YEAR ENDING MARCH 31, 1937

Name	Estimated population of area	Total working costs and other charges	Salaries and wages on generation and distribution and management	Percentage
		£	£	
Birmingham	1,048,000	1,922,487	395,490	21
Bolton	170,400	277,485	58,138	21
Carlisle	59,510	93,067	31,902	34
Hackney	206,700	304,618	94,305	31
Leeds	491,880	612,822	164,297	27
Manchester	751,371	1,506,301	545,814	36
Poplar	136,800	222,043	49,091	22
Wigan	83,486	147,220	24,014	16

Computed from data in *Electricity Supply Returns*, 1936–37, pp. 320 to 422.

considerable number of competing private firms, there is a noticeable proportion of transfer and rotation between private and municipal service. Furthermore, there is much movement from the smaller authorities to the larger, this constituting a kind of promotion and a constant incentive to work well enough to be awarded one of the plums of the profession. The record of a man's career is largely quantitative. He has managed a system with so many passenger-miles, or so many million cubic feet of gas, or so many units of electricity, or so many millions of gallons of water, and the consumers and the prices are all ascertainable from statistics showing progress or

GAS UNDERTAKINGS—CERTAIN LOCAL AUTHORITIES

TABLE OF PROPORTION OF SALARIES, WAGES, ETC., TO TOTAL WORKING EXPENSES ON REVENUE ACCOUNT, YEAR ENDING 1937

Name	Estimated population of area	Total working expenses	Salaries and wages on manufacturing, distribution and management	Percentage
		£	£	
Birmingham	1,048,000	1,171,401	261,583	22
Bolton	170,400	90,330	33,184	37
Bradford	289,360	213,476	44,394	21
Carlisle	59,510	44,254	10,561	24
Leeds	491,880	354,165	105,454	30
Manchester	751,371	530,301	128,943	24
Salford	201,800	162,153	49,290	30

Computed from data in *Field's Analysis*, May 1938.

TRANSPORT UNDERTAKINGS

TABLE OF PROPORTION OF SALARIES, WAGES, ETC., TO TOTAL WORKING EXPENSES ON REVENUE ACCOUNT

Approximately calculated from Abstracts of Accounts of Places named, taking the items as closely similar as possible.

Name	Population	Year, March 31st	Total working costs and other charges	Salaries and wages	Percentage
			£	£	
Ashton-under-Lyne ..	48,810	1938	117,116	29,225	25
West Hartlepool ..	70,100	1938	58,004	22,928	39
Rawtenstall (Motor Bus Accounts only) ..	27,300	1938	68,862	22,709	33
Nottingham	278,800	1938	636,663	318,506	50
Birkenhead	145,500	1938	283,105	140,957	50

decline. All of these men are members of institutions for the promotion of their technology, and also the managerial aspects of their jobs. They meet at annual conferences, they are in continuous touch with headquarters through their associations, journals, and other literature, and by correspondence and visit in order to repair their knowledge, and especially to solve abnormal technological and legal difficulties which arise in the course of their work. They have a high standard of professional honour (black sheep are very rare), which is sustained by membership of their associations, and if there are not more geniuses among them, it is not because there is something inherently repulsive or oppressive in the municipal service, but because genius is rare.

WATERWORKS UNDERTAKINGS

TABLE OF PROPORTION OF SALARIES, WAGES, ETC., TO TOTAL WORKING EXPENSES ON REVENUE ACCOUNT

Approximately Computed from Abstracts of Accounts of Places named, taking the items as closely similar as possible.

Name	Population	Year, March 31st	Total working costs and other charges*	Salaries and wages	Percentage
			£	£	
Ilkeston	32,310	1938	18,898	2,050	11
Hoylake	25,000	1938	28,248	2,370	8
Burnley	89,670	1938	104,665	10,537	10
Norwich	123,000	1938	79,872	15,415	19
Nottingham	278,800	1938	327,214	42,630	12

* Does not include aid to rates or funds transferred to reserve.

Professional associations do not establish salary scales for universal acceptance, but they certainly have scales of salary in mind which they regard as reasonable for the work, and, in their own words, proper "to maintain the prestige of the profession." In the case of electricity, gas, and transport, the figures of work done by the undertaking, are taken as the measure of the grades in the scale of approved salaries. For example, the gas engineers are paid on a rough comparison of the amount of gas made (technically, "the make"), the complexity of the manufacturing process, and amount and kind of residuals, and the ups and downs of the undertaking. For municipal electrical engineers the minimum scale advocated by the Associated Municipal Electrical Engineers, under the aegis of the Ministry of Labour, goes by the total units sold, where the engineers are not responsible for a generating station, and with an addition where the engineer *is* responsible for such a station. For municipal transport managers there is a suggested basis (by the Association of Municipal Tramways and Transport) according to the total passenger-mileage per year.

The vital economic question is how they arrive at the basic unit of salary. They arrive at it, of course, in the same way as any criterion of payment is, in practice, arrived at: by consideration of what has been paid in the past, by some consideration of how many and what quality of candidates there are in the field, and by comparisons with the salaries of professional workers in similar occupations.

Not that municipalities are bound by the suggested salary scales. In fact, as already indicated, they are eager to get a manager as cheaply as they can. They are sometimes not certain how much they ought to pay, and are therefore prepared to take advice from the associations we have mentioned; they even ask for it. But we have met cases where local authorities have offered scales lower than those proposed, and have been able to secure the services of young men who are anxious for the chance. It has happened in such cases that the big job has been well done. There have been occasions when a big job has been offered at a smallish salary relatively to the job, when few applied, when the job was re-advertised at a higher salary, and when finally the original applicant had to be taken on at the new and higher salary. There have been occasions when cities have refused to offer the job at a salary but have allowed the applicants to make their own bids, a kind of Dutch auction.

There have been cases where the associations have protested at the lowness of the salary offered.[1] The Joint Committee of the Associated Municipal Electrical Engineers and the Electrical Power Engineers Association notify their members not to apply for positions advertised below the scale agreed on with the I.M.E.A. representing the local undertakings, and they also enter into negotiations with the offending Corporation. Thus candidates have not answered the advertisements, and the "contrived" scarcity has, of course, maintained the salary-level. There are critics who observe that there is a tendency not to offer enough to attract the best brains. These cannot be ignored as their experience has been extensive and pervasive,[1] even if we discount professional feeling in the matter. It is perfectly obvious, however, that on the whole what is occurring is a kind of higgling of the market around the pivotal points of the material magnitude of the job and the scales generally considered as being fair. We cannot assent to the suggestion sometimes made by the associations of managers that the salary should be commensurate with the "prestige" of the job—on the assumption that the "prestige" is high. Productivity, not prestige, is the proper criterion.

---

[1] In 1930, when Dundee offered £825 a year for a gas engineer and manager, the Institution demurred—arguing that status and professional rank entitled the post to a salary of £1,000 or thereabouts (*Municipal Journal*, 1930, p. 62). In 1934 the position of chief engineer in the electricity undertaking at Walsall became vacant. The retiring official had been receiving £900 per annum. The position was advertised at £600, rising to £750. The A.M.E.A. intervened, and no suitable applications were made. The position was re-advertised at £800, rising to £1,100. The Council founded its proposal to reduce the salary on the view that since generation had been taken out of the hands of the undertaking, a salary of £900 was excessive. The engineers, of course, argue that the responsibility of the job has increased as it is now important *commercially*. This figure is to be contrasted with the salary at Wimbledon, £2,000 per annum and a bonus based on net profits.

Some sample salaries for managers and engineers are given:

WATER*

Town	Output daily	Salary
	millions of gallons	£
1	3·43	950
2	3·72	1,250
3	3·84	1,185
4	3·84	700
5	4·85	1,000
6	5·01	800
7	5·96	845
8	6·18	800
9	7·13	1,000

* From *Public Administration*, July 1939, p. 282, article by Norman J. Pugh, A.M.I.C.E., M.I.W.E., Water Engineer and Manager, Coventry.

---

[1] Cf. Geoffrey Porter, Presidential Address, I.M.E.A., June 1933: But he does not put down the lack of competent men only to pecuniary causes. He suggests they may be producing candidates of inelastic mind; or "a deplorable lack of appreciation of the professional aspect of the engineer's position." More serious is, perhaps, the suggestion that "the view that municipal service is a career for third-rate men alone," and "the active discouragement by their experienced seniors of young men, promising recruits, who might enter the service to the public advantage." Cf. also H. C. Lamb, Presidential Address, I.M.E.A., 1939: He speaks of "the reluctance to recognize that, when large interests are involved, ability is all-important and should be paid for, while mediocrity is dear at any price. . . . Many men of high technical and administrative ability have taken service in the municipal undertakings and have played a valuable part in electrical development, both by their work for their employers and by contributions to the proceedings of the professional institutions. At the same time it is a cause for regret that such a considerable number of able men have left the municipal service, and I would suggest that if we are not to lose ground, this should be treated as a matter of importance."

SALARIES OF GAS MANAGERS AND ENGINEERS

Place	Amount sold	Salary
	1,000's of cub. ft.	£
Southport	845,270	1,000–1,250
Blackpool	1,332,046	950–1,250
Coventry	2,450,742	1,450
Congleton	114,000	500

SALARIES OF ELECTRICAL MANAGERS AND ENGINEERS

Place	Million units sold* (excluding bulk)	Salary
		£
Liverpool	435·294	2,000
Southwark	11·107	950–1,150
Worcester	27·962	1,100–1,200
Canterbury	6·582	900
Nuneaton	12·629	700–800
Luton	110·827	1,800

* Year 1938; Southwark, 1935.

SALARIES OF TRANSPORT MANAGERS

Place	Population	Salary
		£
Southport	78,960	700
Blackpool	123,800	1,250–1,500
Coventry	204,700	1,350–1,400
Bournemouth	121,000	1,250
Portsmouth	256,200	1,200–1,350
Leicester	262,900	1,100–1,250

One question which has much agitated municipal circles in recent years, particularly in relation to the gas and electricity undertakings, is whether or not there should be two managers instead of one, one responsible for manufacture and the other responsible for the sales side of the undertaking. There are very few municipalities in which this separation exists. In one case it was tried but given up, as the defects of divided responsibility and control were experienced. On the whole, the prevailing opinion seems to be that there ought to be some specialization of function, but that the better system is to have one person exclusively responsible for the whole undertaking as engineer and manager, and another, the engineer's secretary, or commercial secretary, responsible for letter-writing, précis, office machinery, cost accounts, statistical returns, filing, attendance at committees, public relations, and the direction of the sales staff.[1] Consequently, this general division of functions is almost everywhere clearly organized, though there are differences in the titles and assignment of duties and working relationships and divisions from place to place.[2]

Much attention has been directed of recent years to the recruitment of salesmen in the gas and electricity departments. Mr. A. W. Smith, General Manager and Secretary of the Birmingham Gas Department—probably the most progressive municipal gas undertaking in the country—has said: "The staff dealing with industrial business has been chosen from men who had made or had been prepared to make a special study of the application of gas to all kinds of industrial heating appliances, from the small soldering-stove to the large forge furnace; men with open minds, ready to assimilate knowledge of special conditions, and apply their knowledge of gas utilization to the special conditions demanded by the prospective customer. Further, they had to be qualified salesmen."

The problem of developing sales and service has assumed greater importance in electricity supply undertakings in recent years since generation has been devolved to a number of selected undertakings. It is a little unfortunate that the electricity engineers tend to resist organization which subordinates the engineer to the commercial or general manager type of organizer. Whatever the outcome of any such struggle, the argument for a separation of duties is sound. It depends partly on personal qualities who should be given priority. Whether separate personnel can be afforded depends on the size of the undertakings. Here the larger undertakings are definitely at an advantage; but, more than smaller undertakings, they need supervision.

The feeling that it was not necessary to go out and seek business, and demonstrate to consumers how gas and electricity could be used, resulted in the past *in company administration as well as municipal administration*, in the unwillingness to engage salesmen. The tendency was more pronounced in the smaller than larger towns. Only recently has attention been directed to training. The older practice was to engage those who had been in business, not necessarily in gas or electricity, or to promote from inside the departments. Now very large numbers of authorities are paying more careful attention to recruitment, particularly under the stimulus of the National Gas Council and the British Electrical Development Association. There is urgent need for the co-operation of local authorities, especially the smaller ones, in undertaking courses, perhaps at the most convenient Technical School central to a large neighbourhood. The B.E.D.A. itself undertakes training. Altogether some 1,679 people have enrolled in its courses. In 1939 it held a salesmanship examination of 972 candidates. Eight undertakings accounted for 356 of these—a rather clear indication of the power and interest of large undertakings to train their staff. About two-thirds of the enrolments seem to come from the companies who seem to encourage their staffs to learn how to sell, often by remitting the fees of the successful entrants.[1]

---

[1] The Hull Electricity Committee in 1938 put their commercial manager at the head of the whole organization as general manager, the chief electrical engineer coming in as the subordinate.

[2] Cf. Alban, *Waterworks Undertaking*; Pilcher, *Road Passenger Transport*, for organization charts.

ADMINISTRATIVE AND CLERICAL

We turn to the administrative and clerical staffs. This subject was investigated three years ago by the Hadow Committee on the Recruitment and Qualifications of Local Government Officials, and the Committee made some interesting observations tending to the improvement of the service.[2] But the recommendations meet with opposition, particularly from the Association of Municipal Corporations and the Urban District Councils.

Our own enquiries have yielded the results which follow. There is considerable variety of practice in appointments, due mainly to the extraordinary variety in the size and importance of the municipalities. Some of them recruit from the elementary schools, without advertisement of the vacancy and without any real competition for the job. Some of them are occasionally actuated by motives of friendship and patronage. But all the larger authorities, and in the last twenty years most of the middle-sized and smaller authorities, have adopted rational and publicly defensible standards of recruitment and payment, either individually or by a common acceptance of standards laid down by Whitley Council procedure. At the present moment, the Whitley Council procedure[1] has established the conditions of employment for all the administrative and clerical staff of the municipalities in Lancashire and Cheshire, the North Wales district, the West Riding, in Middlesex, and the West Midlands. There are also conferences of a Whitley Council type in Scotland, Northumberland and Durham, the Isle of Wight, Cardiff, South Wales, and Wolverhampton. These schemes have been made as the result of the representations of bodies like the National Association of Local Government Officers, the National Union of County Officers, the National Union of General and Municipal Workers, the National Union of Public Employees, and the Transport and General Workers' Union. The effect has been broadly the establishment and the acceptance of standards of qualifications, selection, probation, promotion, payment, and other conditions of work like sickness and holidays.

---

[1] Cf. note in *Municipal Review*, May 1939.

[2] Ministry of Health, Report on Qualifications, Recruitment, Training and Promotion of Local Government Officers, 1934, pp. 32–306.

It is worth considering for a moment the conditions of service obtained in the Lancashire and Cheshire area by this means, as a good example. There is formulated a Junior Entrance Examination, which cannot be taken before the age of sixteen. Vacancies are publicly advertised. Local authorities conduct their own examination or require either Matriculation or its equivalents or the Preliminary Examination Certificate prescribed by the various professional bodies representing or connected with given departments of local government, for example, the Institute of Civil Engineers, the Institute of Chartered Accountants, the Law Society, etc. A year's probation is prescribed, and juniors are expected to continue their studies after entry, and local authorities encourage them, especially by a monetary grant or special increment on their possession of further certificates of their appropriate professional, sectional, or technical exeaminations. The staff is then classified into professional (like medical men, or accountants), technical (like civil or mechanical engineers), administrative, and finally clerical.[2]

These classes are graded up to the maximum salary of £460 per year, differently for males and females. *This classification is made by the authority with due regard to its assessable value, population, and importance.* There is automatic advancement within the section to which the official is assigned, unless he is adversely reported upon. From the junior division the employee passes into the general division at about the age of twenty-two. He passes into a higher class only if the head of the department recommends that his performance justifies the promotion. It is stipulated that promotion is by merit and not by seniority alone, and that opportunities shall be given to the staff to apply for any vacancy. At the age of twenty-six the maximum of the general division will have been reached, and the official will be reported upon under the headings prescribed in the Civil Service Annual Report Form. If satisfactory, he can be admitted into the professional or technical division when a vacancy arises. Provision is made for promotion for exceptional merit. Where an official feels aggrieved by the operation of this scheme, he may present his case through his organization.

---

[1] Cf. various pamphlets on each area scheme published by the National Association of Local Government Officials; *Fifteen Years' Progress*, published by the Lancs. and Cheshire Council, 1935. Cf. also T. S. Simey, *Whitleyism in the Local Government Service*, *Public Administration*, April 1936. Cf. also L. Hill, *The Local Government Officer*.

[2] These designations have the connotation attached by the British Civil Service.

Within our context there are two important questions to consider: the actual operation of the scheme and the basis of the salary. In local government the employer side contains elected councillors. This introduces better understanding than in the Civil Service, where higher officials represent "the employers." On the whole, local authorities operate these rules honourably, although the provisions regarding probation and promotion in cases of exceptional merit are not yet taken as seriously as they should be. The Councils receive many disputes for adjustment.

It should also be remembered that there are many authorities not within the Provincial Joint Council schemes, but which are pioneers and models of good practice, coming up at least to the standards established by the Joint Councils, and some going beyond. Such an authority is the Birmingham Corporation, which collaborates with the Juvenile Employment Branch of the Education Department and the Birmingham Officers' Guild, through a Joint Consultative Committee.[1]

Various ingredients enter into the establishment of the scales of pay. When the present Birmingham scheme was being framed, account was taken of the market value of the official's work at the levels prevailing elsewhere in work of a comparable character, the good employer being taken as the standard. Careful enquiries were made of the payment of insurance staffs, the "big five" banks, the railway companies, large-scale industrial establishment like Cadbury's and Imperial Chemicals. These figures were taken as a guide to salaries below £350 per annum. (It was believed that comparison was difficult above that.) Allowances were made for differences in the agreeableness, security, and heaviness of the work, and the whole was discussed in negotiations with the Officers' Guild.

---

[1] Cf. *Handbook of Salaries, Wages and Labour Committee*, City of Birmingham, December 1932; and *Scheme of Recruitment—Corporation Non-Manual Appointments*, City of Birmingham, December 1936.

The National Association of Local Government Officers, in discussion with the representatives of local authorities, also proceeded on the principle of "fair relativity" between the work of local authorities and analogous work outside. It took a standard which would attract juniors of sixteen to the local government service. It was agreed that by the age of twenty-six there should be a salary equal to the minimum upon which an adult could marry. The stages between went by age-progression till twenty-one, with an efficiency bar at that age. Not all the local authorities in the areas accepted the minima, but certainly something like 85 per cent of the officials were paid at the rates agreed upon. The scales are minimum scales; and big places like Manchester, Liverpool, Wallasey, Birkenhead, and the Lancashire and Cheshire County Councils pay more. Local authorities which reject the minima believe that they can get people at lower rates, since the applicants for jobs are attached to their own districts and the authorities have a quasi-monopoly of employment. They intend to save the rates!

There seems to be a fairly widespread practice of paying the employees in the trading undertakings a little more than the general rates when the undertaking is making progress, and there are rather more dismissals from the trading undertakings in bad times than there are from the rate-aided services, the manager taking the opportunity of getting rid of the less efficient members of the staff.[1] There is more of the commercial incentive in the Trading Departments: the profit comes from the undertaking; there ought to be a share in its prosperity; and it is believed that the incentive will cause its further progress. A special branch of the non-manual employees are the salesmen in the Electricity and Gas Departments. Here special methods of recruitment and training are being elaborated, and bonuses and commissions are given. For example, Hornsey gives a commission based on turnover of electrical apparatus; Burnley on new gas appliances; Ilford commissions which vary according to whether the apparatus is hired or purchased outright. Several managers and engineers work on a commission on the profits of the undertaking and bonuses are granted to showroom assistants. A serious issue is thereby raised. Why should not all those fairly closely co-operating get bonuses?

---

[1] Applicable where members of the staff have not been placed in designated posts under the Superannuation Schemes. Once designated, it is practically impossible to remove officials except for misconduct or inefficiency. But since the Superannuation Act of 1938 most workers are "designated," and therefore the rigidity formerly due to the cause mentioned has been much reduced.

However, the number of authorities granting bonuses is comparatively small. This method of stimulating sales had been used extensively by companies, but has been largely abandoned, because it was found that the sales price of the apparatus bore no proportion to quantity of gas or electricity thereafter consumed, and it was this which constituted the real progress of the concern. It is generally believed better to give the salesman a well-considered regular salary and trust to his wish to retain this to make a good job of his salesmanship. To overcome the disparity between the value of apparatus and the consumption of gas, some local authorities who retain the bonus system (e.g. Rawtenstall and Ashton-under-Lyne) make the bonus vary with "probable annual consumption."

The authority of the manager over his own administrative, clerical, technical, and other non-manual staff is practically complete: we defer the discussion of the manual staff to the next chapter. In the vast majority of undertakings the power to give orders and secure their execution is not impaired by the intrusion of agencies between the manager and his subordinates. Final powers over numbers, conditions, and remuneration are almost universally vested in the Finance or Finance and General Purposes Committee, or a Wages Committee or Salaries and Wages Committee *en route* to the Finance Committee. It seems to me that there is nothing lost by such care and general surveillance and comparison of conditions in the various Trading Departments and the rest of the Council's departments. Within such general controls the Trading Committee is concerned with establishing the proposals for staff, their duties, their relationships, and the hierarchy of organization and authority. In the determination of this, as also in the process of selection and promotion, the manager has, necessarily and by acknowledgment, a preponderant part. There are cases, though very rare, where Staff or Salaries, etc., Committees may have the last word in promotion—this does not work well, because seniority (which is arithmetically recorded) is preferred to merit by Committees which are not directly responsible for the efficiency of the undertaking, and whose knowledge is at second hand.

The day-by-day issue of command and exercise of discipline is in the hands of the manager and his immediate associates through the line of authority he establishes and which the Committee sanctions. Grievances and disputes will come to him from his subordinates for settlement, and (allowing for the non-rational factors) there is nothing to interfere with his settlement of them in accordance with his judgment of the claim of efficient operation. In serious cases, where a dispute results in recalcitrance or cannot be "settled," or where the issue of dismissal arises, there is almost universally a formal or informal process of appeal. The formal process occurs through a Joint Staff Advisory Committee, which is rare. More commonly, as in Birkenhead (Standing Order No. 80), there is an appeal to the Trading Committee, often without stipulation that a Staff Association representative may appear as spokesman, sometimes with it. The informal cases occur where there is a recognized but not a written right of appeal to the Trading Committee. Those in official authority know that they cannot be ruthless in their disciplinary demands or tactics, since they may have to answer in detail for their actions. The system is much less ruthless than in ordinary private enterprise, and perhaps not so severe as in the utilities administered by companies; yet it does not in practice follow that the pace, zeal, and morale of the employees is depressed below the level of the latter. The manager may have an annoying job to steer between the needs of efficiency and the kind-heartedness of one or more of the members of the Committee, and he bears the brunt of the procedure. The employees do not take undue advantage of the system by frivolous appeals. Yet it cannot be left out of account that, when in trouble, some make private appeals for intervention to councillors on the Committee or of influence with it, and that there are always some among these so sensitive to the claims of justice to the workers or ready to make a public pose as just men that they will further the appeal. In some cases this can and does have an inhibitory effect on the manager who gets tired of standing out against such assaults, or so angers him as to make him brusque with staff and councillors.

It is not difficult to formulate a proper division of responsibility between Manager, Committee, Staff or Establishment Committee and Council.[1] This has in the majority of cases been done. What is difficult is to introduce and maintain a severe spirit of responsibility, in its respective sphere and not beyond it, of each agency concerned. In most cases experience has taught what this is; but there is still a good deal to be done.

---

[1] For example, an excellent arrangement exists in the Metropolitan Borough of Hampstead. Cf. Standing Orders, 1938.

THE QUALITY OF MUNICIPAL EMPLOYMENT

Local officials are not overpaid.[1] But officials have a very high degree of security. The number of dismissals is negligible. The main disciplinary measure for relative inefficiency is transfer to an easier job with lower pay, or no promotion. Critics of municipal services therefore allege that even if local authorities do not pay a higher salary than private enterprise, the fact that there is no dismissal except for gross inefficiency, results generally in a slower stroke than in outside employment. Usually this is an *a priori* argument, based upon the unuttered major premise that people will only work in direct proportion to rewards and punishments. Our own actual observation, made with the most resolute attempt to avoid bias, warrants the assertion that in most cases local officials actually work harder than their fellow-citizens in the neighbouring private businesses. Much depends on their Council, their Committee, the personality of their manager or departmental chief, and the sense of civic consciousness in their area. Where, through complaisance, or negligence, or the application of wrong principles, these are at fault (and this happens in an appreciable proportion of the cases in one or all of the undertakings), slackness occurs at some points. If it could be seen that results were affected employees would be brought up sharply, but the statistics are not minute enough to show the results in the degree to provoke punishment. A reputation for severity makes Committee and manager unpopular; in a private concern the consumer is not inclined to blame a manager who drives his employees. Yet on the whole municipal employees do a very fair day's work.

Our enquiries have shown that all young people look for *a job* as early as they can get one, especially the sons and daughters of the working and lower middle class, who form the backbone of the municipal service. Usually they accept the advice of their elders. These, having experienced the insecurity and fears connected with private employment, direct them into an occupation which offers a modicum of comfort, security, and more chances of their talent being recognized than is the case in private business—at any rate, small and middling size private business. When youngsters first enter public employment they do not think of the public good because they are not, being young people, as yet conscious of what it implies. But it is not very long before they declare, without persuasion, that they would far rather work thus than for the advantage of a private employer. This theme is most remarkably stressed.

---

[1] Cf. Salary Table in Appendix to Chapter.

As time goes on, the official becomes more skilled, and more and more is his own personal fortune and progress identified with the quality of his work. Some, like their colleagues in private business, become a little disillusioned and cynical about the almighty public and their own colleagues. But they are continually stimulated in their efforts by their Committees, by deputations and letters from bodies of citizens, and by their general everyday contacts with the rest of their society. Of very great and growing importance is the sense of value and self-respect engendered by the various professional societies. Not sufficient attention has yet been drawn to their significance as builders of a professional sense of responsibility and (by research and conferences) contributors to the science and art of the particular profession. If this function were regarded more deliberately, much more still could be accomplished. It is very important for the public to realize that between a range of 5 per cent more than a certain quantum of salary or 5 per cent less makes very little difference, if any at all, to the stroke of the work, so long as all officials are in the same situation and are treated, even if differently, according to the same criteria.

All this does not imply that there is no need of improvement. There is much. First, there ought to be much more attention paid to the probationary stage. Many entrants into the local government service are merely children. What can they know of the work? What can they know of their aptitude and liking for the responsibilities as they will be by the time they are twenty? It should be ruthlessly selective both out of regard for the individual himself and his future and his worth to the municipality. Secondly, there ought to be a very definite scheme of post-entry training. The youngster should be taught much more about the relationship of his activities to other divisions of his own department. This should be done by a regular scheme. Some person or persons should be made definitely responsible for this. Further, the natural co-ordination of the work of a municipality in all its departments should be made clear by demonstration of the relationship of his own to other departments. The significance of his job should be made clear by full explanation of the social function performed by local government to the whole nation. Thirdly, it should be compulsory on all officers of the Council not merely to acquire their own technological qualifications but also to obtain one of the diplomas of public administration now instituted in several universities, which would give them the background of knowledge, and more, the rationale, of their own existence and service. This ought to be an official part of service duties, for the comparative shelter of public employment from the heavy storms of the economic market means a tendency to apathy. Finally, there ought to be many more conferences among local officials, and occasions for refresher courses about the social meaning of their work, and the new advances in the natural and social sciences silently impinging on it and revolutionizing its structure and function.

HONESTY AND SECRET COMMISSIONS

It is surprising how much suspicion is still expressed regarding the honesty of local administration. This suspicion is very largely a relic. It descends from before the extension and improvement of central control and the development of better standards in the local authorities themselves, fostered largely by their associations, of which the first was the Association of Municipal Corporations, established in 1875, and the professional associations of the officials. Nor in the past have some councillors and officials been as incorruptible as the public welfare demands. There is no need to hesitate about the admission of this. If the purpose of the criticism is merely to direct attention to the need for the necessary controls and a change of heart, the better to serve the public good, then it is to be welcomed. If it is intended to cast a slur on local administration to the advantage of private enterprise, then we can point to two things. The Law Courts daily reveal the corruption of business, and all those with business experience know how much is hushed up. Further, local government converts every citizen into a legitimate critic of the public service; and when any shady act is discovered it is most bitterly deplored as a falling-away from the standards which are held to actuate municipal administration. Let it be admitted, then, that there are some rogues in local administration; but let it also be admitted that there are quite as many in private enterprise. An analysis of the special audits conducted by the district auditors shows that the officers who are obliged to resign from office annually as the result are guilty of plain defalcation, embezzlement, acceptance of commissions, and the non-observance of the conditions which should be employed in the placing of contracts. We have already said[1] that about ninety officers cease to hold office every year for reasons of this kind. In some cases prosecutions are instituted. This, of course, is deplorable,[1] but things must be taken in perspective: there are hundreds of thousands of officials and workmen to whom audit applies and whom audit does not implicate. It is true that the boroughs are outside the audit which reveals such cases as this, and that audit might reveal a proportionate number of culpable actions in their undertakings. But the proportion already established is petty.

---

[1] Cf. Chapter Six.

A great deal of blame is attributable to the firms who try to secure orders by suborning public officials. Association meetings have proposed the establishment of blacklists of such firms.

---

[1] Cf. Carson Roberts, Address to I.M.T.A., Annual Conference, 1931.

APPENDIX TO CHAPTER

SAMPLE SALARY SCALES, JULY 1937*

A County Borough (Industrial)

Juniors	£40 by £10 to £80
Second Class	£100 by £20 to £200
Intermediate	£210 by £10 to £250
First Class	£260 by £10 to £300
Seniors	£310 by £15 to £375

Heads of Sub-Departments, £400, by recommendation of Committee to £600.

A County Borough (Non-Industrial)

Juniors (age 16)†	£26 by £13 to £78
Grade 5	£104 by £13 to £156
Grade 4	£156 by £13 to £208
Grade 3	£208 by £13 to £260
Grade 2	£260 by £13 to £312
Grade 1	£312 by £10 to £364

An Urban District Council (Residential)

Grade A	£50 by £10 to £130
Grade B	£100 by £15 to £250
Grade C (1)	£250 by £15 to £300
Grade C (2)	£250 by £15 to £350
Grade C (3)	£250 by £15 to £400

Grade D. Salaries determined by Council. Shorthand Typists rising to maximum of £150.

An Urban District Council (Industrial)

Juniors (16–20)	£40, £50, £60, £70, £85
Grade B (21–27)	£110 by £10 to £130, thence by £15 to £190
Grade C	£200 by £10 to £230
Grade D (Sec. 1)	£200, £215, £230, £240
Grade D (Sec. 2)	£255 by £15 to £300

FEMALE STAFF

Juniors (16–20)	£40 by £10 to £80
Grade B (21–24)	£100 by £10 to £130
Grade C	£120 by £10 to £150

---

* Extracted from L. Hill, *The Local Government Officer*, pp. 176–78 (George Allen & Unwin Ltd.).

† Juniors are placed in Grade 5 on attaining the age of 21 on satisfactory report.

Chapter Eleven

PERSONNEL: MANUAL WORKERS

It is not our intention to discuss whether the wages and conditions are economically justifiable, but rather to consider the process of establishing them. Before entering into any detail these general facts may be stated. First, with the exception of passenger transport, standard wages and conditions are determined in common with those of the company-owned undertakings by National Joint Industrial Councils. Secondly, all the municipal undertakings which are members of the Councils (all but a few are) are regulated by nationally set standards with prescribed zonal variations. Thirdly, industrial peace has been unbroken save for the year 1926.[1] For grievances are adjusted through Works Committees or by direct contact between Trade Union representatives and managers or the Committee of the Undertaking. This necessarily has its effect upon discipline and the morale of the workers. Fourthly, it follows that rates of pay are stabilized over a series of years and are "sheltered" or "sticky." They do not respond to the annual ups and downs of the business of the undertakings, and are a fixed charge not directly related to earnings. The same holds good of working conditions. Nevertheless, readjustments of the stipulated rates can and do occur where there is cause. Either side, for example, may raise the question of regrading within the scheme established for the industry. Fifthly, it is not possible to determine whether, as a whole, the workers in these utilities are getting more from the national dividend than they should. No standard of comparison is available except the rather uncertain one of "fair relativity." Peace in the industries may, of course, be bought at the expense of the consumers.

In the electricity undertakings the machinery of negotiation consists of a National Council and thirteen District Councils. In the larger undertakings there are Works Committees, and they play an important part in regulating the detail of working conditions such as equipment, shifts, minor grievances, disputes, washing conditions, etc. About four-fifths of the total employed are represented on the Councils. This preponderant proportion exerts a strong influence on the conditions of the unrepresented. The chief trade unions involved are the Amalgamated, the Electrical Trade Union, the National Union of General and Municipal Workers, and the Transport and General Workers' Union. Their representation on the Councils is in proportion to the size of their membership.

---

[1] There are special restrictions on "wilful and malicious" breach of contrac of service in municipal gas and water and electricity undertakings, under Sections 4 and 5, Conspiracy and Protection of Property Act, 1875, and under Section 31, Electricity Supply Act, 1919; and under the Trade Disputes Act, 1927, Section 6, municipal employees come under further obligations.

The possibility of being out-voted has caused some undertakings not to participate. Furthermore, considerable difficulty was encountered in establishing the comparative representation of municipal and company undertakings. This was settled for the Districts by taking the relative size and number of the undertakings as the basis. Occasionally, the absence of some big undertakings, municipal or company, hampers the Whitley scheme: in 1933 the absence of Glasgow, Dundee, Inverness, and Dumfries, as well as certain company undertakings, made it impossible to conclude negotiations for wages revision asked for by the trade union side of the Scottish Regional Council. Those who remain outside do not necessarily pay less than members. Among the reasons given for not participating are the possibility of being compelled to pay a rate of wages higher than they feel necessary, and the desire to deal unhampered with their workers according to merits of the specific local situation.

The prime question is to find national principles that can fit or be made to fit the greatly varying conditions of work and economic capacity of the undertakings throughout the country. There are large differences between areas and in areas. The former are dealt with by determination of thirteen Districts, and the latter by fitting the undertakings in each area into several categories. The Joint Industrial Council supervises the actions of the District Councils which possess large powers of fixing wage schedules. In some cases the National Council's consequent agreements cover all Councils without differentiation; in others it has had to abandon the hope of a national agreement and be content with District agreements. All proposals formulated by the Districts are submitted to the National Council, which examines them for their compatibility with conditions in the rest of the Districts.

The chief functions of the District Councils are: settlement of hours, wages, and conditions, including rules regarding holidays, apprenticeship, juvenile labour, overtime, and shifts; co-ordination of local workshop practice; welfare work; improvement of health conditions and treatment for workers; training for industry.

These functions, it may be stated now, are, in general, assigned to the District Whitley Councils of all the utilities with which we are concerned.

If a difference seems likely to arise in an undertaking the District Council must try to solve it, and avoid or settle a strike or lock-out. On failure, it must refer the matter to the National Council. Yet the District Council is not autonomous, but subject to a large control by the National Council. It has to make recommendations to the Council, and consider any matters referred to it by this Council. The executive power of the District Council relates only to subjects deputed to it by the National Council. In its own jurisdiction the District may take executive action only subject to the right of veto by the National Council, and this veto is exerciseable wherever the interests of other Districts are involved. Such control is practised, though with moderation. The undertakings penalize their members for disobedience. As the trade unions are national, their executives are able to exert pressure on the branches; and they do, in fact, prevent Districts from conceding principles detrimental to labour in general for the sake of concessions to themselves.

A District contains about five counties. It is in this large area that the District Council attempts to frame a schedule generally applicable. An average wage schedule is impracticable since there are such vast differences between the undertakings, which run from super-power stations to small distributing concerns. There are extra dangers involved in producing the higher kilowattages, and there are different standards of living in big and small towns. To arrive at some order the undertakings are sorted into categories known as Zones. Zone means, not a particular area, but a notion of capacity or maximum load of the stations. An area might contain three or four Zones, and some contain perhaps only the first and the lowest. The wage schedule for the District is then modified in respect of each Zone. This may be done by an actual figure, as, for example, rates in Zone B may be ¾d. an hour less than Zone A, while in other areas the difference is expressed as a percentage. In some places there are no Zones. Thus the Home Counties contains undertakings so much alike that the only difference made between them is that those with a capacity of 800 kW and less may pay rates 5 per cent below the standard.

If an undertaking's capacity increases it may be put into a higher

Zone on the application of either side, and wages will accordingly rise. It is claimed for this wage system that it achieves rough justice. It meets cost of living differences between places, and allows for the economic significance of the undertakings. Of course, the interval between the Zones is arbitrary: the relationship between size of undertaking, size of town, and its cost of living is not perfect. Zoning is settled by the District Councils as local knowledge is essential. The National Council intervenes occasionally if a re-zoning up or down provokes a dispute.

The first national agreement was made in November 1921. Wages were then referred to a sliding scale based on the cost of living. This system lasted until 1931. The arrangement did not sufficiently allow for inter-regional differences in economic conditions. In 1923 some undertakings asked for a reduction of wages. In 1924 a re-adjustment upwards was made. After the General Strike a special increase, unrelated to the cost of living, was made to all the workers. As general prices fell, a rather large reduction had occurred by January 1931, and, further, the increase of 1927 was withdrawn. The trade unions gave notice to terminate the agreement. There were new demands: for a forty-four hour instead of a forty-eight hour week, and a different basis for wages. The gulf between the two sides of the National Council could not be bridged. To avoid the imminent struggle, the Minister of Labour intervened. It was decided that each of the District Councils should revise wage rates, and on failure their case should come before the Industrial Court. Seven Councils reached agreement, six went to the Industrial Court. Since then various increases have been made to restore cuts of 1931, and to reward switchboard attendants whose responsibilities have been increased with the increased capacity of plant under the Grid system. In 1935 the unions sought a substantial increase on the basis of industrial recovery and the special prosperity of the electrical industry. It was unsuccessful. But it is interesting to note that the arguments revolved around the issue of the cost of living, the prosperity of a rapidly developing industry, and the relationship of wages in the electricity industry to those in other occupations.

WATER SUPPLY

In the Whitley machinery for the water undertakings, the District Councils are of supreme importance in the fixing of wages, the National Council acting merely as a mediator. But the latter assumes chief power over conditions. The largest proportion of the employees are in municipal undertakings, and these therefore have the weightiest influence in the District Councils. Water supply compared with the other utilities has very few skilled workers: jointers and turncocks are perhaps only the skilled grades employed. There are therefore few nicely graded classes of workers as compared, say, with electricity supply. Moreover, the demand for water is little affected by industrial slumps and booms. Water undertakings are not so evenly spread through the country as the other utilities. Hence in places with very few and small undertakings, there are no District Councils. Finally, wages form a much smaller proportion of total costs of production, and it is therefore relatively easy to reach agreement on wages and conditions.

Only about one in two of all the undertakings are represented on the District Councils, and these are chiefly municipal. In some areas the Councils have a full quota of representatives, in others the representation is deficient. Three Councils do not function at all: the Eastern, South Western, and the North Wales areas. It is in the highly developed urban areas such as Yorkshire, the Midlands, and around London that the Councils operate with effectiveness. The agricultural areas have no need or are reluctant to work the Whitley system. They do not wish to bind themselves to agreements which may not suit their local interests. Yet they are not, therefore, bad employers. They follow the Whitley members' rates and conditions, with local modification.

The District Councils possess much the same range of powers as the District Councils in electricity supply. In all except the matter of working conditions they are practically autonomous. But the National Council has a wages revision scheme which is recommendatory. It shows a far greater interest in securing national uniformity of conditions, such as holidays, overtime, etc. Yet, again, its recommendations need not be followed by the Districts, and the National Council only proceeds by persuasion and by pointing to the best practice as an example to the more backward. It is not negligible, for it has a national representative on every District Council, and possesses prestige. Its recommendations therefore have weight. It has an arbitration panel to solve disputes of various kinds, chiefly to determine disputes on the re-zoning up or down of undertakings.

Intra-district differences between undertakings are settled by the method of zoning. In this case the basis of the Zone is the population of the town in which the waterworks is located. Thus, in the Midland

District, towns with a population of 90,000 and over constitute Zone A. Towns and Urban Districts with from 90,000 to 20,000 are in Zone B; those with under 20,000 make Zone C. Where individual undertakings extend through Districts in which different conditions prevail, these individual undertakings are divided into Zones according to the location of the various parts. Employees are considered to belong to the place from which they receive their immediate instructions. Naturally, for each Zone there is a different rate of pay, fixed more or less arbitrarily, according to the magnitude of the supply, the cost of living, and the wages prevailing for general labourers in the neighbourhood. Since there has been no national wage in this industry, a history of changes in the various Districts would take us too far afield. The National Union of Waterworks Employees, the National Union of Public Employees, the National Union of General Municipal Workers, have from time to time sought adjustment in particular grades. There have been no disputes in the industry acute enough to require the intervention of the National Council.

TRANSPORT

In 1919, when the Joint Industrial Council was set up, passenger transport was primarily a tramway industry. The struggle between those who wanted separate Councils for municipal and private undertakings and those who urged a common Council for the industry was won by the latter. But there is no longer a single Council for road passenger transport. The growth of motor transport caused the formation of a multitudinous variety of bus concerns, many very diminutive. The trade unions found it extremely difficult to organize the workers. After the Road Traffic Act of 1930 was passed municipal and company undertakings changed over from trams to buses, usually taking over the tramway staff. An ever greater need was felt for the expansion of the membership of the Tramways Joint Council. By 1936 there were these negotiating bodies: (*a*) the Tramways Joint Industrial Council, composed entirely of municipal tramway undertakings, including almost all that existed. It included no trolley-bus workers; (*b*) the L.P.T.B. negotiating separately with the unions; (*c*) private tramway companies, negotiating separately, and (*d*) municipal buses and private buses, governed by the "fair wages clause" of the Road Traffic Act, and negotiating with the unions. Since 1936 there has been crystallization. In 1937 a new Joint

Industrial Council was constituted to embrace *all* the forms of municipal transport undertakings. The services in private hands remain outside the Council and are governed by the Fair Wages Clause.

In 1919 nine District Councils were established. They met only during 1920 when they assisted in classifying the tramways into groups. In 1924 when a new classification was prepared, the National Council alone acted. In 1937 the new constitution omitted District Councils, leaving only the National Council and Works Committees. Up to 1937 local disputes were referred to the District Branch of the trade unions. Where these felt that they were not competent they sent the matter on to the National Council. We need not state the terms of reference of the Council: they were as in the cases already described. There are some fifty Works Committees in operation. They regulate the small detail of work, equipment, quality of mess-room service, time-schedules, disputes with superiors, ventilation, lighting. If they so wish they may refer disputes to the National Council. This they rarely, if ever, do, leaving such matters to the Union Branch Office.

In order to deal with wages or conditions, it is necessary to apply to the Council for revision. If the Council cannot reach agreement, the question stood referred to the Tribunal. This body was an *ad hoc* body called for the first and last time 1924. It consisted of ten people drawn in equal numbers from each side of the Council, along with four non-members co-opted by each side. The principles on which the wages of motor men and conductors are based, notwithstanding the new Constitution of 1937, were substantially settled in 1924 by the Tribunal. Up to 1919 wages and conditions had been settled locally, and therefore there were marked differences, some justifiable by different prosperity of the various undertakings, others quite fortuitous. The different rates were taken as the basis of changes which occurred in 1919: additions that were nationally applicable. There was some grading in these additions in accordance with the financial position of the undertakings, the facts to be taken into account by the District Councils. In 1921 further changes in wage-rates were made dependent on the index of the cost of living. By 1923 the Union came to the conclusion that wage-rates presented far too many anomalies, and assent was given by the employers to stabilization of wages until a comprehensive review was possible. In May 1924 the Tramways and General Workers' Union applied for a revision of wages. After abortive negotiations on the Council the question was referred to the Tribunal.

The unions demanded standard wages for all grades; the grouping of undertakings into four groups; an addition of 10 per cent on an average wage-rate for each of the groups, this average being based on the average of the total maximum grades; and nobody to get less than 52s. per week for a forty-eight hour week. The undertakings were not averse to the principle of re-grouping, but objected to it in so far as it was designed to increase the rates of wages. They defended their attitude by making comparisons with rates of pay in other industries, and present and pre-War rates. They denied their ability to pay more. A compromise was reached. Six groups and two special ones were set up. No employee was to suffer by the re-grouping. No one was to receive an increase of more than 1s. 6d. per week. The ground of the decision was that "where rates as in the tramway industry have been built up haphazardly, the attempt to standardize the wages of all grades of workpeople presents many difficulties, and there may be undue violence to the interests of the employees and the tramway authorities respectively." Hence, existing rates had to be taken as the basis for re-grouping. The average of the maximum rates payable in each group was found, increased by 10 per cent, and carried to the nearest sixpence; and there was the proviso that nobody's wages should be depressed below their present earnings nor increased beyond 1s. 6d. These weekly rates were for forty-eight hours.

These groups are the equivalent of the Zones in the other industries. Whereas the bases in those were plant capacity or population or rateable value, here they were an attempt to reduce to order the chaos of rates, and they were based on these rates, already existent. Thus, the re-grouping was one of expediency. Since it was based on the ability of the authorities to pay, to a great extent, it responded to the realities of the situation. But the trade unions have ever since attempted to get the rates made more even, by reducing the number of groups. They succeeded to the extent of reducing the original six to three and one special group. The National Council has since 1924 dealt with disputes insoluble regarding re-grouping and re-grading. Paragraph 51 of the Report of the Tramway Tribunal of 1924 embodied what is the practice in the other utilities, viz. it opened the door for particular increases or decreases of wages, while permitting a national framework of standard rates to govern the general situation. Many adjustments have been made in wages and conditions. As to the latter, when the National Joint Council for the Road Passenger Transport Industry was set up in October 1937, a fresh agreement was made regarding the operating and maintenance staff. There is a guaranteed week of forty-eight hours for not less than 90 per cent of the staff, and a forty-hour week for the rest, with the payment of ordinary rates for standing ready for duty. This is to meet the problem of peak traffic. There are rules to assure the presence of extra staff at the peak hours and on special occasions. There are overtime payments, and special payments for wide spread-overs, day and night work, etc. The holiday privilege increases with the years of service to twelve days after three years.

Unemployment where it exists is seasonal. It is to be found in such places as seaside resorts where summer brings extra passengers and winter diminishes normal transport. Measures have been taken to meet this fluctuation by the spreading of the men's leave. The trade union has the right to question the discharge of workers, and this has made jobs more stable than in earlier years. It has even created a new evil: recruits to the industry who previously had to wait a year before becoming fully established staff now have to wait two or three until the numbers of those employed are sufficiently diminished to make room for them.

Since 1930 the Road Traffic Act has established control of the character and capacity, conduct, and ages and conditions of the drivers and conductors of all public service vehicles. Where there was a strong machine for collective bargaining, as in the tramway system, the conditions were fulfilled. Their non-fulfilment in the motor-bus and coach system finally led to the widening of the Tramway into a Transport Council. When company-owned buses competed with municipal trams and buses without any control, the municipal systems were either in danger of depressing their conditions of work, or had to face heavy losses. They obtain some protection by the application of the Fair Wages Clause[1] and other standards of the Traffic Commissioners who grant the licences. The fact that municipalities apply tramway conditions to trolley and bus employees, a higher standard than prevailed in the latter case, gave and still gives company undertakings a great advantage.

---

[1] "The Contractor shall . . . pay rates of wages and observe hours of labour not less favourable than those commonly recognized by employers and trade societies (or, in the absence of such recognized wages and hours, those which in practice prevail amongst good employers) in the trade in the district where the work is carried out. Where there are no such wages and hours recognized or prevailing in the district, those recognized or prevailing in the nearest district in which industrial circumstances are similar shall be adopted. Further, the conditions of employment generally accepted in the district in the trade concerned shall be taken into account in considering how far the terms of the Fair Wages Clauses are being observed. . ." Hansard, March 10, 1909.

The National Joint Industrial Council for the Gas Industry was established in 1919, after a long history of hard conditions and annoying disputes in the industry. Representation on the National Council is shared by the Federation of Gas Employers and the seven trade unions which cater for the various workers. The Council actually includes undertakings making approximately 80 per cent of the total gas manufactured in the country. There are ten Regional Councils. The distribution of power is almost identical with that in the electricity industry. The National Council is the final decision-making body, and takes action in the matter of wages and conditions while the field of the Regions is subject to the veto power of the National Council.

There is a national Zoning and grading scheme, the latest formulation dating from September 1937. The maximum number of Zones is three, but there are even Categories and Counties denominated in some areas (instead of Zones), and in the Southern Region the Zoning is Suburban, Industrial, Residential, and Miscellaneous. When a national reconsideration of the basic rates has been proposed by either side, the National Council considers three questions. First, can the present state of the industry (sales, profits, and field of expansion) warrant the claim? Secondly, would such a claim injure the prospects of the industry, or cause unemployment in view of the competition to be faced from other forms of fuel? Thirdly, what changes have occurred in comparable industries? The basic rate is calculated on the annual make of the undertakings in each Region. The facts are determined by the Regional Councils. Upgradings are determined by increased annual make. The Regional Councils have the right to increase wage-rates especially for various classes of work other than labourers, stokers, and fitters. Some local authorities go beyond such basic rates, and by agreement with the Trade Unions, give bonuses for improved productivity. For example, all manual employees may receive a bonus of one shilling a week in relation to a given figure of cost per therm, and then, as this cost rises or falls by certain percentages, one penny is added to or deducted from the shilling. In case of carelessness, negligence, failure to obey rules or regulations, or unpunctuality, the bonus is reduced or withheld. (Bonuses are also given to bus drivers for economy in the use of petrol, and tram and bus drivers obtain rewards for records clear of accidents.)

The decisions of the Joint Industrial Council are maintained by the power of the organizations on each side to penalize recalcitrancy. But this has not been necessary. The chief criticism of the system is that inefficient undertakings are expected to pay the same as efficient ones. Workers sometimes complain that the system prevents their using their Trade Union strength against a particular employer for better conditions than the basic ones.

The fluctuations of employment have been slight. The industrial depression naturally caused a fall in employment in the manufacture of this important fuel. Unemployment is produced also by amalgamations, the closing of redundant plant, and the purchase of coke oven gas.

. . . . .

Neither the Superannuation Acts of 1922 nor that of 1937 requires that manual labourers—"servants" in distinction to "officers"—shall come under such schemes. Under the former Act which was voluntary in regard to all employees, a fair number of authorities had by 1937 included manual labourers in schemes; and in some cases local authorities had done the same through Local Acts. This special designation of some of the staff to superannuation resulted in a reduction of disciplinary power over them, because the central department concerned with supervision of the scheme introduced rules tending to the restriction of dismissal to gross inefficiency or negligence. Since 1937 officers are under compulsory schemes, and "servants" may be, and indeed are, widely included therein. The schemes are contributory.

It would appear that the necessary elasticity in manual staff is found in the existence of a considerable temporary group. The movement is largely seasonal, and applies in the main to the less skilled workers. It needs no great imagination to guess at the seasonal fluctuation in the demand for electricity, gas, transport, and water. Some figures show the extent of temporary staff:

LEEDS: MARCH 31, 1938

OFFICIAL AND WORKMEN

	Permanent	Temporary
Electricity	837	589
Gas	957	446
Transport	2,960	1,088
Water	200	127

BIRMINGHAM: MARCH 31, 1939

	Permanent	Temporary
Electricity	2,961	120
Gas	2,957	889
Transport	7,740	260
Water	824	398

But some authorities seem to manage with many fewer temporary workers.

A few words are necessary regarding discipline and works management. Within the Works Committee arrangements of the Whitley arrangements or outside it, the Trade Unions are in extremely close contact with the management. There may be Trade Union officials on the Council or Trading Committees. Naturally, the first contact is between the workman and the manager. There is far less control by the Trading Committee over the manager in regard to the manual workers than the administrative and clerical employees. According to character and experience the managers elaborate and practise the means of staff relations.[1] It is generally true, however, that managers must tread a little delicately in their relations with the workers. For sometimes, in the last resort, there is the possibility of an appeal to the Trading Committee. Almost always the Trade Union representative can be persuaded to intervene, or a Labour representative on the Council may be approached to speak for the workman who is in trouble. As we have already said, this is not so much a question of electoral influence as it is of the psychological impact of "organized Labour." Hence there is a tendency for workmen to resist managerial pressure, even where it is reasonably exerted, and for managers, after one or two attempts, to avoid disciplinary action even where it is technically pertinent. It tends to slacken pace, and therefore to increase costs slightly.

---

[1] Cf. comments in Pilcher, *Road Passenger Transport*, chap. 18 ff.

PART THREE

THE SIZE AND TECHNOLOGY OF THE UNDERTAKING

Chapter 12. Water
„ 13. Gas
„ 14. Electricity
„ 15. Transport

SIZE AND EFFICIENCY

The efficiency of an undertaking depends largely on the size of the area it serves and on the density and kind of population within that area. A large output usually makes possible relatively low average costs of production, resulting from "economies of scale." On the other hand, a large area means high costs of distribution (longer distances) unless the population is fairly dense. The area of municipal government is not necessarily the technical best for any particular municipal undertaking. Local government areas result from factors unconnected with the modern necessities of the undertakings. In particular, English local authorities have been kept small by demands for democratic control.[1] This implies the ability to get at the officials without waste of time and expenditure on travel. It implies also an area small enough to be capable of visualization, and therefore control, by elected representatives who, as will be explained, can give only casual service. In the long run, it may be except in crucially bad cases, better to risk small additions to price because the area is not the technically optimum size, rather than risk weakening the impact of consumers' control.

In recent years the development and examination of the technique of the undertakings has increasingly revealed the inappropriateness of their areas. It is necessary to take each of the undertakings in turn and show the administrative conclusions to which investigation leads. It may later be asked whether the local government system as a whole, and the fundamental and far-reaching values which it subserves, can accommodate the changes which are necessary, and on what terms.

Since the ensuing discussion is necessarily detailed, a cardinal lesson of it may be suggested at once. Most current criticism of municipal areas concerns their smallness. There is considerable substance in this. But the conclusion is not the crude one that the remedy is enlargement unconditionally. That is far too simple a view. If there are economies of scale, there are also the diseconomies of distance between the producer and consumers; of elaborate organization to overcome this, itself an encumbrance and the destroyer of sensitive response to changing demand, and the introducer of rigidities. There are, besides, actual technical impossibilities according to the nature of each service. Two quotations will bring this home. Mr. C. R. Westlake, the General Manager and Engineer, Finchley Corporation Electricity Department, has said:[1]

---

[1] But I am not unconscious of the will of the governing group in the district, whatever its class, to keep its preserve untouched.

> "Undertakings operating over a wide area with a number of local offices and district staffs have to exercise the greatest care in avoiding a dead-weight of head-office staff and an expensive system of reports, forms and records. It is of the utmost importance that wide powers should be given to local staffs.
>
> It is possible not only to increase administrative costs out of all proportion, but by the creation of endless 'forms' to slow up every operation of the undertaking. Lord Stamp has said: 'I have come to the conclusion that no highly diversified institution . . . can move faster than its forms allow it.' "

And Mr. J. S. Austen, Chairman of the British Electric Traction Company, dealt with the same theme (with transport in mind) as follows:[2]

> "There is a very prevalent idea that huge concerns result in efficiency and economy, whereas exactly the reverse is the case. It has probably happened, although there are other factors, in the case of our railways. I sincerely hope that the 'Square Deal' will be a success, but I quite fail to see how, with their present highly centralized organization, they will ever be able to derive the full benefit from it. . . .
>
> Many of you have probably heard officers say that about half of their time is taken up by writing reports and filling up forms. That does not happen in the case of the smaller concerns such as this company manages or controls. . . .
>
> "You may think this is a trivial matter—just the signing of a form or two, and as a matter of fact I say at once it is the most trivial thing I can think of. But I will try to show you what it means. In a company—not by any means a big company—the clerk whose business it was to make out the dividend warrants omitted to have the word 'pounds' printed on the body of the warrant, and so he had to write it in himself. I made a calculation and found it would take him about one day and a half to write in that one word. Take this case: Some time ago it was found by one of our companies that on the average one minute more was being taken to wash a bus than it should take. Of course it was put right. I do not suppose you worry much whether your chauffeur takes a minute more or less in the washing of your car, but in this case it meant £170 a year to the company, and to earn that they would have had to carry something like 20,000 more passengers and not know where to get them.
>
> This is a little example of efficiency, and I quote it to show you what the waste of time which is inherent in all these vast undertakings really means."

---

[1] *Public Administration*, July 1939, p. 305: "Electricity in Relation to Municipal Trading."

[2] Forty-Third Ordinary General Meeting, *The Times*.

Chapter Twelve

WATER SUPPLY AREAS

ROUGHLY speaking, the territorial administration of water supply is dependent upon the historical accident of localized supplies and upon the notions and technology of water distribution prevalent in the middle of the 19th century, when the general system of public health administration was being established. The power to supply was vested in the boroughs and the urban and rural districts without provision for any more general grouping of their activities. The dominating factor in the technology of water supply is the elementary phenomenon that water runs downhill. Consequently the basic unit of collection and supply, and the two are naturally connected, should be the geological unit in which the water is caught, and from which it can be made to flow down the valley. This is known technically as the Catchment Area. It is only when this is used as the basis of administration that one can begin to plan economically. For the capital costs involved in water supply are in some cases as much as 50 per cent of the total cost of production,[1] and this chiefly for reservoir and impounding works, pumping machinery and mains. It is of the highest degree important that no local authorities should take a high gravitational location for themselves when their need can be supplied from a lower level, leaving the higher supplies for authorities at a high altitude without pumping. It is important that parallel pipe-lines leading in the same directions shall not compete with each other. It is important that pumping stations should not be built in rivalry. All the uses of water calculated as to the present and estimated for as much as a half a century ahead should be reviewed in relationship to each other, domestic, industrial, sewage, and for power purposes in order to avoid waste of water and of capital equipment. If these principles are not obeyed then, (*a*) there must be and indeed there are, very varied charges over the country;[2] (*b*) some are dearer than they need be; (*c*) some are cheaper than they ought to be, if the idea of national solidarity is accepted.

---

[1] For example, in 1935–36 loan charges were £9,770,664 and working expenses £10,501,468

[2] Cf. Chapter Seventeen, pp. 368 ff. infra.

The remarkable thing about most areas of water supply is their smallness. The smallness enhances the already great difficulty of securing co-operation between the neighbouring undertakings, and this in spite of a number of very important reports urging a better basis. In 1910 a Select Committee appointed to consider a Bill introduced to deal with the taking of distant sources of supply,[1] recommended the division of England into "Watershed Areas" with local representative Councils to make continuous enquiries about water supply, to take all measures to husband supplies, to stop pollution, to advise on the allocation between sanitary, industrial, and domestic supplies. In 1921 the Water Power Resources Committee reported that the watersheds of the country should be grouped into suitable areas, and that where desirable there should be established Watershed Boards in substitution for the large number of local authorities now concerned with different interests. They pointed out the remarkable variation in the charges for water; the waste of equipment; the litigation between authorities representing different interests; and the growing use of water both domestically and industrially, necessitating concerted means of avoiding waste and seeing that the smaller rural authorities are properly supplied. They remarked upon the unreadiness of local authorities to take joint action, and that some system of external guidance was necessary. Yet local authorities are unwilling to concede the desirability of joint arrangements for any substantial service, because they fear that this may be used as an argument for their total absorption in some large municipal area.

This state of affairs has two chief results. As the need for water expands, either for domestic, public health, or industrial use, local authorities look to supplies outside their own area, assuming that their own resources underground, or in a river, etc., are insufficient or too polluted for economical purification. As for decades, this went on without central co-ordination, claims to sources cross each other quite unreasonably. Secondly, in order to forestall the taking of any further source, local authorities on the spot or *en route* enter claims before the Private Bill Committee seized with each local proposal. This results in vexatious negotiations, legal argument, expense, and delay. We give two, chosen from many examples.

In 1930 Stockport promoted a Bill to secure more sources. The undertaking had been acquired from a company in 1898. Expert advice had miscalculated the storage capacity of the reservoirs then proposed, and, in addition, the cost of construction proved to be greater than anticipated. Seven adjoining urban districts were supplied, two in bulk, five in detail, and by the terms of the local Act they were charged at the same rate as residents in the borough. But any deficiencies had to be made up out of borough rates only. The urban districts, now faced with the possibility of higher charges, petitioned Parliament against the Bill, pointing out that charges were already almost the highest in the country. (This was true—18s. 11d. minimum where net annual value of residential property was £5.) The urban districts argued that Stockport could have produced at a lower price by preferring bore-holes to reservoirs, or could buy from Manchester in bulk—at any rate, that this was not the cheapest available scheme. Expert engineering testimony convinced the Committee that the Stockport proposals were sound. Again, in 1934 Tynemouth promoted a Bill to construct further waterworks, to reduce the amount of compensation water which it was liable to send down the River Font, and to amend the provisions governing the rate of charge for water. Since the Corporation had acquired the undertaking of a company in 1897, it had several times needed to come to Parliament for new reservoirs or to meet the claims or proposals of districts in the neighbourhood to take water for themselves which would have depleted its source, some miles distant. The conflicts were resolved by the inclusion of districts in the Tynemouth water limits. The Corporation was obliged to give various districts bulk supplies at stated prices. As costs rose the Corporation bore losses and sought powers to increase prices, which were naturally opposed. In 1924 the House of Lords had rejected the Corporation's contention. A struggle now occurred with Ashington district: it had refrained from taking water which would have affected the source for Tynemouth on condition of a stipulated price. Other districts complained of an invasion of their statutory rights. A conflict raged around the question of admitting an arbitration on price, whether the arbitrator should be appointed by the Minister of Health, whether or not he should be restricted in deciding what items were to be included in cost. Engineers faced engineers. Financial experts clashed. Finally, a standing arbitrator appointed by the Minister of Health, exemption from increased prices for Ashington, supply in bulk at cost, and new rates for domestic purposes, were enacted.

---

[1] P.P., No. 226, 1910.

In 1923 the central authority, the Ministry of Health, which is obliged to step with remarkable wariness owing to the obstinate claim to independence by local authorities, established a Departmental Advisory Committee on Water. Its purpose is continuously to inquire into the water situation and to point out the need for local collaboration. The Ministry, advised by its Committee, have adopted the policy of persuasion and pressure to secure at least the formation of Regional Water Committees composed of a few local water authorities who should study and undertake plans for co-operation.[1]

Steady persuasion by the Ministry of Health has resulted in the formation of nine such Advisory Committees, for South-West Lancashire (23 authorities); Sherwood Area (25 authorities); Isle of Wight (6 authorities); West Riding of Yorkshire (150 authorities); North, Central, and South-East Lancashire (47 authorities); Cheshire and North-West Derbyshire (44 authorities); West Midlands, comprising Staffordshire, Warwickshire, and Worcestershire (60 authorities); the county of East Sussex (33 authorities), and the county of Kent (excluding the area of the Metropolitan Water Board): in all, about 400 authorities covering 15,000,000 consumers. In other words, more than half of the areas of municipal undertakings are now subject, at any rate, to some co-ordination of policy. A useful device has been adopted by the Ministry in arranging for one of its engineering inspectors to act as liaison officer between the Ministry and each Committee; three of the Committees have made him their chairman. This secures a blending of the technical skill of the engineer, the knowledge and experience of the local representatives, and the introduction of national planning considerations. Naturally, these Advisory Committees take a great deal of time in making their surveys and plans, because although they cannot be unconscious of the social waste and local loss caused by delay, they felt no vital urgency to spur them on.

The Central Advisory Water Committee, while applauding the work of the Regional Water Committees, has made some eminently reasonable proposals for improving on this situation.[2] It considers that they have shown themselves too weak to cope with their problem. Their reliance on the mere good will of the constituent authorities for information of demands and supplies, technical assistance and funds, has met with difficulties in some cases, and it is anticipated that with the increase in the gravity of the problems beneficial co-operation will be even harder to achieve. It is all based on "the good will of the more public-spirited authorities," too rare a quality compared with the nature of the problem. The Committee recommend that all authorities in the region should be legally liable for a share of the common expenses, based on their rateable value. They propose that all who abstract water, not merely local authorities, shall be compelled to furnish statistics required by the Ministry of Health. They look to a reduction of the numbers of representatives of the Committee to ten (the present numbers vary between twenty-one and fifty-seven), the chairman to be appointed by the Minister, five members representing and appointed by water undertakers, and five by the various local authorities. These Committees would be *obliged* to consult all interested bodies, including Catchment Boards, Fishery Boards, Harbour and Navigation Authorities, and industrial water users, before final proposals were drawn up, wherever the interests of such bodies were likely to be affected by them. The Committees would be compelled to furnish reports to the Central Advisory Committee at least annually, and the latter would advise the Minister on disputes or the need for co-operation among the Committees. The Central Advisory Committee consider it unnecessary to set up Committees except in thickly populated areas where there is a real need, but recommends their formation in the Greater Metropolitan Area, North-East England, and South Wales. "The exact boundaries of the regions can be delimited only after such consultation, or possibly local investigation, but we consider that while the regions should include, as at present, aggregations of population with community of interest in sources of supply or in the distribution of water, their boundaries should correspond also, as far as practicable, with the boundaries of the watershed areas in which the populations are situated."

---

[1] Pamphlet on Regional Water Supplies, 1928, pp. 3 and 4.

[2] First Report, 1938, especially part iii, "Planning of Water Resources and Supplies," pp. 19 ff.

The Central Advisory Committee then enters into more vital matters. Not all undertakings participate in the Committees; and even among those who do there may be failure to reach unanimous agreement. Regions, therefore, are not or may not be the most desirable, and schemes may be frustrated. Hence the Committee proposes the arming of the Minister with additional powers, of important scope. The Minister would be empowered to *require* the submission of proposals from Regional Committees (or, where non-existent, from undertakings) within a time specified by him, or to prepare a plan or cause one to be prepared for the area of a body in default, at its cost, to ensure that proposals are carried out. The Minister would also have power to appoint Regional Committees for planning, or alter areas, after consultation with the interests concerned, where planning is not otherwise attainable. The Minister would act in default by the same procedure as in other default powers in the Public Health Act, 1936.

The attitude of the Association of Municipal Corporations to these proposals is highly interesting and not very fortunate.

> "The Association object to the power of compulsion or alteration of regional water committees being conferred upon the Minister. They submit that if it should be necessary to confer such powers upon the Minister, his powers should be provisional only, and in case of opposition, subject to confirmation by Parliament. The Association object to the conferring upon regional water committees of any powers or duties other than those of an advisory nature."

The Association also objected to the Minister having compulsory powers to form Joint Boards.[1]

A serious problem, as in all the undertakings, is the supply of rural areas. Local authorities have in their special Acts the power to supply beyond the immediate district of their own municipality and most of them do so. For example, Manchester supplies not only itself but also the whole or part of twelve other authorities. Liverpool supplies its own needs and the whole or part of eleven other authorities. Birmingham supplies its own needs and the whole or part of six other authorities. But usually the range of external supply is small. The rural districts have either been able to supply themselves, in the small populous spots, from wells, and therefore have not come into connection with the municipal supply; or they have been deliberately neglected by the urban areas because it is a very expensive matter to construct a grid going far out into the countryside with the certainty that the cost of production cannot be met by the rural consumers.

This situation has been improved in recent years by two measures. The first is the Local Government Act of 1929, which under Section 57 empowered rural district councils and county councils to contribute to the cost of rural schemes out of their general funds. Until 1929, the development of rural district undertakings was restricted because deficits on a water scheme had to be met out of the special rates of the parish concerned, and since the parish concerned was not prepared to pay the full burden of the necessarily heavy costs for its own service, it objected to such schemes as rural districts occasionally put forward. A large and growing number of rural district councils now meet the whole of the deficiencies on rural schemes out of their general funds.

---

[1] Cf. *Municipal Review*, 1936, pp. 210–12.

County councils have by the Act of 1929 established schemes of assistance. As an instance we may take the Cheshire County Council's scheme. Schemes assisted are only those where the water rate is high—1s. 6d. in the £ in rural districts and 2s. 6d. in urban districts. Works qualify for grants only where they have been approved by the Ministry of Health and recommended by the County Medical Officer to the County Council. Before making his recommendations the County Medical Officer must "satisfy himself that the proposed works are necessary, that they represent the most satisfactory method of providing the service required, that they will provide for the needs of a sufficiently large area, that they will provide for such early further development as can be reasonably anticipated or can be adapted to make such provision, and that they will serve the needs of a reasonable number of County ratepayers." The grants are annual; they are variable according to the rise and fall of rate burden; they are in respect of capital costs—interest and repayment. The works must be managed and maintained satisfactorily to the County Medical Officer.

Finally, by the Rural Water Supplies Act of March 1934, the Government allocated £1,000,000 for grants in aid of rural water supply, each case being taken on its merits. Both the county councils and the rural district councils have been stimulated by this grant, the county councils making it a condition of their grant to the latter that they shall apply to the Ministry for their share of the £1,000,000. The £1,000,000 grant was exhausted by 1938 in respect of nearly three thousand parishes with a total estimated capital in respect of about £8,700,000.[1]

Besides these arrangements to secure a wider area of supply, there are two further provisions of importance: Joint Water Boards and the Supply of Water in Bulk Act of 1934.

Local authorities may form joint schemes with their neighbours in the form of Committees or Joint Boards under the provisions of the Public Health Act or by Private Bill procedure. Section 279 of the Public Health Act, 1875,[2] permits the Ministry of Health (then the Local Government Board) to form a united district of any water supply districts, upon their application, if it appears to the

---

[1] This is estimated from figures in the Annual Reports, Ministry of Health, 1936–37 and 1938, pp. 70 and 65 respectively.

[2] Superseded by Public Health Act, 1936, Sections 6 ff.

Ministry that it would be for the advantage of such districts and any parts thereof, for the procuring of a common supply of water. The costs, charges, and expenses become a first charge on the rates leviable in the united district. The order constitutes the Governing Board, consisting of representatives of the local authorities of the districts and parts of districts. There appear to be about forty such Joint Authorities.[1] Only five seem to have been established by Provisional Order, the rest by Private Bill. The truth is, as was indicated earlier in this chapter, that neighbouring authorities are so often serious competitors for supplies that the issues are fought before with all the procedure of opposed private Bills.

Some of these Boards are extensive in their operation, others very small. Thus Aspatria, Silloth, and District Water Committee supplies 10,000 population; Harrington and Distington Committee, 6,500; but others are substantial, for example, Accrington and District, 78,000; Ashton-under-Lyne, Stalybridge, and Dukinfield Committee, 138,000; Barnet District, 157,117; Irwell Valley Water Board, 172,000; Staffordshire Potteries, 358,000, and the Taf Fechan Water Supply Board, 421,000. Besides these examples, there is the Derwent Valley Water Board serving Derby, Leicester, Sheffield, and Nottingham Corporations in bulk[2] (Derbyshire County Council is represented on the Board, being one of the constituent authorities); and the Durham Water Board, covering seventeen urban districts, and Durham City, and more than eight rural districts, and several others in bulk. These joint authorities have made arrangements for supplying their consumers on better terms than thay could have obtained individually. But the method has been tedious and has involved considerable expense, excepting in the very smallest cases. Once the bargain has been allowed and ratified by Parliament, change is difficult, and there is a persistence of contentiousness on some Boards. In my opinion, the adherence of Parliament, and especially the House of Lords, to the view that a charge for bulk supply to its neighbours as settled by Parliament constitutes a contract not to be amended from time to time is an obstacle to progress. The essential nature of such an Act is not a contract so much as the fixing of a price.[3]

[1] Cf. *British Waterworks Directory*, 1936; and Wills, op. cit., p. 74.

[2] The Derwent Valley Water Board was formed in 1899. Derby, Leicester, and Sheffield were then all fighting each other over the control of the waters of the Derwent, the Ashop, and their tributaries. Nottingham Corporation and Derbyshire and Nottingham County Councils were opposing them all! The House of Commons Committee refused the powers and asked the parties to come to a common arrangement. The Act cost £98,865.

[3] Cf. Case of Manchester, Salford, Stockport, and Hyde mentioned p. 74 supra.

However, the device of the Joint Board which has full authority (while the committees need reference back to the constituents) is a very useful one. As will be deduced from the above figures, something like three million consumers are thus provided for. It is not a large proportion of the total, yet it is useful.

The chief difficulties of a Joint Water Board are manifested and mainly overcome in the process of formation. Thereafter they work smoothly and beneficially. The reason apparently is that the principal problems are the securing of sources of supply, and the settlement of the contribution of each authority to the total capital required. Demand for water is not elastic as in the case of the other utilities. The Boards have not a large membership; fifteen is one of the largest. Members are usually members of the Water Committee of the constituent municipalities, and it is the custom to choose the senior and most experienced members. Whatever the term of appointment, whether for one or three or five years, it is the custom to re-elect, so that with very few exceptions the evil of short terms is absent. There is little feeling that democratic control by the ratepayer is weakened, or that if it is, that it matters. From time to time some councillors, when in a minority, argue that there should be more publicity, and that all proceedings should require confirmation by the constituent Councils for their validity. In general, however whether the Joint Boards only concern themselves with supply in bulk, or, supply in detail also, there is satisfaction with their operation. At least one Board has arranged to break deadlocks by appeal to an arbitrator, and the Ministry of Health is looked to for a nomination.

The extension of this system is hampered by rivalry and jealousy among neighbouring local authorities, the separation of local authorities by areas supplied by companies, the anticipation of difficulty in their operation once established, and according to evidence given before the Joint Committee on Water Resources and Supplies,[1] by the view that the best solution in many cases is for the smaller areas to take the supply from a large undertaking. However, these areas are not organically linked to their neighbours, excepting through the Regional Planning Committees; nor are their limits of supply necessarily the most desirable today, since they were formed some time ago and even then could only include the areas which could be induced to co-operate at that time.

The reforms now recommended by the Central Advisory Water

---

[1] 1935, H.L. 120, H.C. 121; p. 40.

Commitee[1] have considerable merit. It is proposed that the powers of the Minister of Health under the Public Health Act, 1936, should be extended to allow him to make orders forming or altering a Joint Board or its district without the necessity of prior application by an interested authority. A public local authority would be held as part of the procedure leading up to the order. The Minister would, further, be given general power to settle disputes between any Joint Board and any of its members on the application of the Board or of any constituent authority. Finally, the Minister, after public local enquiry, could authorize by the order the amalgamation and acquisition of undertakings, whether by a local authority or a water company, the terms being settled by an independent body or person, unless the undertakers would prefer the Minister or a person appointed by him. Where opposition to such schemes are propitiated or withdrawn, a simple order would suffice. Where not, of course, Parliamentary confirmation would be necessary.

The Supply of Water in Bulk Act was passed in 1934 in order to give general powers to all statutory water undertakers, including local authorities, to make agreements with each other for the buying and selling of water in bulk. Prior to this, local authorities had had the power, under the Public Health Acts, to supply their immediate neighbours, and some statutory companies had acquired powers in private Acts to sell water in bulk. The new Act enabled large cross-country deliveries to be made. Section 61 of the Public Health Act, 1875, had only permitted sale to an adjoining district, and that only to a local authority. Now there is the power to supply to any undertakers, whether municipal or private enterprise, and to buy from them, for any period and on any terms and conditions that may be agreed either within or beyond the limits of supply of the undertakers concerned. The Minister, whose consent is required for such an agreement, must withhold it if it appears to him that the giving of the supply would be likely to interfere with the supply of water for domestic and other purposes within the limits of the supply undertakers. In other words, an obstacle is established to the overcharging of the local consumers by an attempt to sell in bulk at greater profit elsewhere, or perhaps merely as the result of miscalculation. If the area to be supplied in bulk is an area of supply of any other undertakers, the agreement can only be entered into with the consent of those undertakers. In other words, there is an attempt to prevent price-discrimination, and all the process of acute competition that might proceed from it. Nor must water undertakers who have special powers to supply in bulk supply beyond their own catchment area.

---

[1] Report, 1938, pp. 25 ff.

Before leaving the topic of bulk supply it ought to be noticed that Sections 113 and 117 of the Public Health Act of 1936 made it possible for undertakings to supply areas just outside their own area of supply where such undertakings could supply at a reasonable cost, thus relieving the undertakings in the area of primary supply of a prohibitive burden. Previous to the passage of the Act, the object had been accomplished by private Acts. This follows the principle of the Fringe Order in Electricity Supply. The Draft Bill of the Central Advisory Water Committee, Clause 3, generalizes this power. The Minister of Health would make an order if agreement had been reached locally. Further, Clause 4 proposes that undertakers shall be *obliged* to extend their mains to consumers not supplied by reason of not being able to pay the total agreed amount to secure supply. Section 123 of the Act of 1936 gave local authorities power to pay the undertakings the deficiency, but these were not obliged to accept it. The proposed clause will take away the power of refusal of extension from undertakings.

LOCAL AUTHORITIES RECEIVING WATER IN BULK

ENGLAND AND WALES (EXCLUDING JOINT BOARDS)

YEAR ENDED MARCH 31, 1935

Percentage of total water supply received in bulk	Number of authorities receiving			
	Borough Councils	Urban District Councils	Rural District Councils	Total
Percentage				
1– 20	12	1	—	13
21– 40	3	2	3	8
41– 60	2	1	1	4
61– 80	3	1	1	5
81–100	13	16	5	34
Total ..	33	21	10	64

SOURCE: *British Waterworks Directory.*

Most markedly, and differently from the other undertakings, the central problem of the water undertakings is the problem of the proper discovery and distribution of supplies. This explains why mere figures of the length of mains *for distribution to consumers* only

STATISTICS OF CERTAIN MUNICIPAL WATER UNDERTAKINGS

YEAR ENDED MARCH 31, 1935

Undertaking	Miles of mains	Sales, in millions of gallons yearly		Consumers, in thousands	Percentage of sales			Price received per million gallons	
		Total	Per main-mile		Domestic	Measured	Bulk	Domestic and measured	Bulk
					Per cent	Per cent	Per cent	£	£
Manchester	1,467	18,200	12·4	1,517	51	32	17	40	25
Liverpool	1,213	14,440	11·9	1,081	58	26	16	24	28
Keighley	68	760	11·2	50	65	31	4	41	65
Sheffield	749	7,560	10·1	778	47	29	24	80	30
Watford	68	634	9·3	52	79	21	—	44	—
Bilston	58	541	9·3	45	70	29	1	39	—
Birmingham	1,492	11,960	8·0	1,077	62	32	6	87	21
Hull	572	4,310	7·5	363	64	32	4	32	36
Epsom	65	438	6·7	31	61	39	—	20	—
Nottingham	737	4,660	6·3	453	63	36	1	63	23
Leicester	595	3,540	5·9	389	59	32	9	85	34
Southampton	588	3,010	5·1	304	65	35	—	47	—
Greasborough	5½	21	3·8	3	90	10	—	36	—
Hinckley	50	182	3·6	29	42	20	38	76	60
Ryde	60	165	2·6	49	94	6	—	40	—

SOURCE: *British Waterworks Directory.*

explain comparative costs in a very minor degree. It is overwhelmingly a geological problem, because water, besides having the fundamental quality of running downhill, has also this other quality, that to a very high degree it cannot be manufactured at will. One is dependent upon the available sources. The problem, then, is how best to tap those sources wherever they are. If they are contaminated or chemically impure, works are necessary to render them consumable.[1] Two problems therefore arise, one which we have already in large part dealt with, namely, the problem of co-operation or competing for uses; and the problem of coping with waste. In the other undertakings, that is electricity, gas, and transport, the principal preoccupation of administrators is the stimulation of demand. If some consumers use the commodity or service wastefully, the municipality need not complain, because it is being paid for; and this tends to reduce the price of the commodity for others. But with water it is necessary to prevent waste by some undertakers who obtain sources which *on a national view* should far better be left to others, and to deal with the individual consumer who wastes water. This last point is left and dealt with later.[2] A little more needs to be said on the sources of water and their proper allocation.

There ought to be a central survey of all water sources. As the result of the report of the Water Power Resources Committee such a survey is now being undertaken. The Inland Water Survey Committee was set up first in January 1935, by the Minister of Health, composed of persons with scientific and practical experience, with the duty of advising on the survey, on its progress, further measures required, and the making of an annual report. The survey seeks to collect reliable records of river flows and especially of underground water. The Ministry intend to encourage the keeping of the necessary records by the various supply undertakers. This leaves the more detailed and local questions, like the quality of the water at the projected sources, the levels of source in relation to the area of distribution, and the suitability of sites for dams for impounded surface-supplies, to the local water undertakers. The Advisory Committee on Water, first set up in 1922, was enlarged on March 25, 1937, to consist of representatives of the Associations of Local Authorities, of individual local authority water undertakers, of water companies, and of water engineers. It is well adapted to its work of reviewing the major problems of water supply and to advising the Ministry on matters of general policy which arise from time to time. This body was set up in anticipation of legislation to follow the recommendation of the Joint Committee on Water Resources and Supplies,[1] that a statutory advisory board be set up to (*inter alia*) advise the Government Departments as to the initiation of schemes or proposals that the Board consider necessary in the public interest and also as to pending legislation.

---

[1] The factors mentioned in this paragraph powerfully affect the relationship of wages to total costs. Cf. p. 202 supra.

[2] Cf. p. 374 infra.

The former Committee issued three reports, one in 1925[2] on the law and practice in relation to the abstraction of underground water by undertakers, another in 1929[3] on amendments necessary to the law relating to water supply in order to secure its modernization and greater adequacy to modern problems, and another in 1930,[4] recommendations regarding the assessment of compensation water, that is, the quantity of water which must be passed down a stream impounded for water supplies. The Central Advisory Water Committee issued its first Report in 1938. Its recommendations are of great importance.

The great problems of supply lie in the realm of surface water, underground water, compensation water, and the provision for reserves in case of drought. Surface water forms the chief source of supply. It is almost entirely water from the upper reaches of rivers, generally impounded where there is little or no contamination. In recent years improved methods of purification have made it possible to use water abstracted from the lower reaches of the river. This has greatly increased supplies and lowered costs, for the advantage of greater accessibility outweighs the cost of purification. It is regarding this surface water that the question of compensation arises. If the water is caught high up the river in reservoirs, water undertakers are depriving persons downstream of supplies. The law must prescribe a minimum regular flow to be maintained. This is done in the private acts establishing the local undertakings. The method is very expensive, because in order to equalize the flow, undertakers must build reservoirs of sufficient capacity to allow for their own supplies and special quantities to go downstream in the drier days of the year. The method of assessing this compensation was evolved seventy years ago. The average annual rainfall over the catchment area is estimated for as long a period as possible. This is reduced by a fifth, in order to estimate the rainfall which might be relied upon during a period of three consecutive dry years. From the remainder is deducted a number of inches of rain (generally 14 inches to 16 inches) for loss due to evaporation and absorption, in order to determine the "reliable" or "available" yield. This yield is then divided, usually in the proportions of two-thirds for the requirements of the public water supply and one-third for the river.

---

[1] Report, July 1936; and see B.P.P., 1934–35, vi, vol. i. H.L. 147, H.C. 121, vol. ii. H.L. 120, H.C. 121.

[2] Ministry of Health, 1925.

[3] Ministry of Health, Second Report on Legislative Sub-Committee.

[4] Ministry of Health, Report, Technical Sub-Committee.

This was adversely criticized by the Water Power Resources Committee (Par. 256–262). The Advisory Committee recommended a more up-to-date method of assessment especially allowing for industrial uses and the difference between steadily and unsteadily flowing streams.

About a quarter of the population is supplied from underground sources. When local undertakings ask for powers to abstract water from these sources, the Minister of Health, in pursuance of the power of sanctioning loans, lays down such conditions as will prevent wasteful competitive boring or pumping. Further, Parliament can and does protect the water supplies of private persons or industries by obliging the undertakers to compensate the owners of neighbouring wells which will be injuriously affected. The owners of land remain, nevertheless, unconditional competitors for all the water under their land which does not flow in defined channels. There is nothing limiting them in their rights of abstraction for their own use, for their businesses, or for sale to others.[1] It is in regard to this fact that water undertakings argue that theirs are not "monopolies." Nor is there any limitation upon the pleasure or negligence of wasting the water. Nor is there any obligation on people who sink shafts to obtain coal or other minerals to construct the necessary apparatus to conserve the supplies of water in the water-bearing formation, although often large quantities of water are pumped away to waste, or are allowed to become contaminated.[2] Local authorities and private owners have no remedy against such bad neighbours; nor against those who pollute their supplies by the deposit or discharge of substances which foul the subsoil near their land, unless they can prove the precise source of pollution, which is practically impossible.

The Advisory Committee on Water have made recommendations to cope with these difficulties. They suggest that the Ministry of Health should have power to make orders, confirmable by Parliament, to schedule areas where the demands on underground water require that special measures of protection should be adopted. A public enquiry would precede the formulation of the Order. Within such areas fresh wells and new mines could only be sunk by agreement with the central government, and on its terms for securing that the public needs for water would not be prejudicially affected. In the case of coal mines, of course, the necessity for winning the mineral has to be balanced against the necessity for conserving water supplies. The Minister would have the power, further, to make regulations for preserving the purity of underground water, and for compensation for injury arising to individuals. Public water undertakers would have a power, generalized from certain private acts, to protect their supplies from pollution by the acquisition of land in the neighbourhood of wells, by restrictions on its use, or by requiring particular methods of drainage, with proper compensation where interests were injuriously affected. It was to be made an offence to allow underground water to run to waste from bore-holes. The existing law relating to the fouling of streams, etc., was to be extended to the fouling of the subsoil in the vicinity of any wells or adits of water undertakers, and further to protect private wells from the fouling activities of any persons. Finally, the Minister should have power to obtain from any company or person such returns of the quantity and quality of water abstracted from underground as he considers necessary, other than in respect of water taken by a private individual for his own domestic use.

---

[1] In 1936 Wolverhampton Corporation obtained protection in a Local Act against private wells.

[2] Cf. Debate, April 12, 1934, the Water Supplies (Exceptional Shortage Orders) Bill for argument on the effects of this.

The drought of 1933–34, lasting for twenty-one months, was the greatest on record for any such period. It was the most severe ordeal for water undertakers ever known. Owing partly to the foresight of the urban water undertakings, which means mainly municipal undertakings, and the prompt organization of waste-saving and rationing measures by the Ministry of Health, the situation was successfully met. For each local authority separately to establish reserves adequate to meet all such droughts (almost unpredictable) would be a very heavy burden. It has been estimated that it would mean an additional charge of *not less than one shilling in the pound on the local rates*, payable continuously in good years and in bad. In default of such reserves plans must be ready for any emergency which may arise. No doubt the gradual linking-up of the supply undertakings through the regional water committee and agreement under the

Supply of Water in Bulk Act can do much to provide reserves at an acceptable price.

Popular talk of a water "grid" confuses technical with economic efficiency. The belief that it is possible to have a great nation-wide network of mains which will take water anywhere from anywhere is mistaken for two good reasons; the cost of pumping is very heavy, and there are many small local supplies which cannot form a contribution to a central pool but which can be used cheaply for local supply. The latter question is gradually being answered by, first, the engineering enquiries which are being continuously undertaken by the inspectors of the central authority; and, second, by the practice of the Ministry of Health in compelling local undertakings to take into account all the various sources of supply in the neighbourhood and the conflicting demands for water when they come to Parliament or the Ministry of Health for permission to supply or to raise a loan for development.

The general upshot of this discussion, then, is this. The original situation was bad because it started with small authorities, and because local feeling and the desire for self-development, even at the expense of municipal neighbours, was permanent and persistent. Those who secured first claim had, as a group, supplied themselves with a necessary commodity at a cheap price: a change might mean paying more rates. But this situation is being overcome by insistence in Private Bill Committees that they do the sensible thing. Reports, and perception of national waste caused by want of co-ordination, have caused the gradual development of both a legislative national policy and administrative methods whereby this criss-cross of areas and interests is being overcome by joint operation, enlarged areas of supply, advisory co-ordination committees, bulk supply and more central administrative direction. There is still much to be done to overcome over half a century's vested interests.

Chapter Thirteen

GAS UNDERTAKINGS AREAS

GAS UNDERTAKINGS

Until recent years, the extension of the area of gas supply beyond municipal limits was settled either by the private legislation of a local authority or by the Special Orders giving them powers and permitting changes in their original powers. Even before the War most local authorities supplied beyond the areas of their own undertakings. They dealt with their own suburbs either by the method of direct supply, or else by sale in bulk to the smaller local authorities, who then acted as independent distributors. As for supply in bulk, it was not and is not in total a matter of great magnitude. In 1935–36, 45 gas undertakings were selling in bulk, of which 19 were local authorities, and 55, of which 15 were local authorities, were buying bulk supplies. In 1921 bulk supply amounted to 380 million cub. ft.; in 1935 1,200 million cub. ft. This represented 0·4 per cent of all gas supplied. The Gas Regulation Act of 1920 permitted undertakings on a Special Order of the Board of Trade to buy gas in bulk, and in the Model Gas Bill of 1923, local authorities as well as statutory companies were given powers to contract with any local authority, company, or persons for the supply by them or to them of gas in bulk.

If an examination is made of the size of gas undertakings and the results of their operations, there is no clear conclusion that the larger the authority the greater the efficiency. Thus, if size in terms of amount sold is considered, neither the manufacturing nor the distribution charges nor the working expenses descend steadily as size increases: the results are entirely eccentric. The costs, in fact, may cover better services, better research for the national advantage, better conditions of work, geographical good fortune, more capable sales management, etc.

The cause of this lack of correlation between size and efficiency is in part the technology of gas production and distribution and in part historic and local circumstances. It is accepted that on the physical side the large gas plant is at an advantage: its equipment is purchaseable at a less cost as capacity increases, machinery can be used

RELATIONSHIP BETWEEN SIZE OF UNDERTAKING AND CHARGES

(Based on Field's *Analysis of Gas Undertakings in 1937*, Edition May 1938)

Undertaking, in ascending order of size	Therms sold (nearest hundred thousand)	Consumers (total)	Length of mains	Consumers per mile of mains	Manufacturing charges per consumer	Distribution charges per consumer	Working expenses per consumer
			Miles		£	£	£
1. Widnes	2·0	12,187	75	162	0·00818	0·00550	0·02160
2. Carlisle	2·9	20,108	156	130	0·00388	0·00380	0·01526
3. Rochdale	3·0	30,892	160	193	0·00594	0·01219	0·02607
4. Halifax	3·6	32,618	247	132	0·00900	0·00968	0·02333
5. Huddersfield	6·2	49,641	348	142	0·00668	0·00813	0·02059
6. Oldham	6·3	62,020	310	200	0·00488	0·0074	0·01998
7. Salford	7·3	83,228	405	205	0·00659	0·00766	0·02212
8. Bolton	8·0	55,631	411	135	0·00366	0·00370	0·01129
9. Bradford	9·8	95,517	583	164	0·00681	0·00794	0·0217
10. Leicester	11·6	93,317	636	147	0·00700	0·00988	0·02530
11. Nottingham	13·1	127,282	674	189	0·00508	0·00639	0·0189
12. Leeds	14·7	154,592	1,417	109	0·00798	0·00793	0·02409
13. Edinburgh	18·3	132,175	637	207	0·00491	0·00544	0·01555
14. Manchester	28·3	221,439	1,239	178	0·00536	0·00588	0·01873
15. Glasgow	43·2	335,233	1,454	231	0·00649	0·00518	0·01883
16. Birmingham	80·0	336,378	1,931	174	0·00572	0·00511	0·01464

economically for various processes rather than labour. But there is the possibility of less efficiency and higher cost in the administrative and supervisory factors. Furthermore, of the total cost of gas to the consumer nearly one-half, as the previous table indicates, is represented by the cost of getting the already manufactured gas to him, i.e. for sales, service, maintenance, capital charges on mains and services, management, rates, taxes, etc.[1]

This difference throws out of gear results emanating only from consideration of manufacturing cost. Distribution costs locally are conditioned to the highest degree. They depend on the personal qualities of the local Gas Committee, the administrative tradition of the authority, the fortunate or unfortunate selection of manager and staff, *and* the composition and habits of the actual and potential consumer-body of the area. The small area here has the great advantage of being known street by street, almost house by house, to the sales-promotion organization. This may be aided or offset by the proneness of the body of consumers to gas services, their readiness to take this rather than other fuels.

Furthermore, gas is not the only product of a gas plant. Of considerable inportance are the so-called "residuals"—most important of which is coke. In 1936 sales of coke bore the following significance to total returns for certain municipal gas undertakings:

REVENUE FROM SALES OF COKE COMPARED WITH TOTAL REVENUE FROM GAS SALES AND OPERATION

	Total income	Coke sales	
	£	£	
Bury	106,935	14,117	Year ended March 31, 1938
Chesterfield	93,155	9,812	Year ended March 31, 1939
Congleton	19,602	2,615	Year ended March 31, 1936
Newcastle-under-Lyme ..	65,976	13,040*	Year ended March 31, 1938

* This may be compared with Mansfield, in the year ending March 1938 £46,601 and coke sales £139. Most of Mansfield's gas is bought from coke ovens.

In the main, coke is sold locally, and its successful sale depends on a detailed knowledge of the local market.

Hence the maximum that can be said with safety about municipal areas and gas undertakings is that the working results must in each individual case be very carefully examined before a case for an area can be sustained. It would be necessary to investigate questions of cost produced by historical factors, such as market and financial conditions prevailing at the time of inception. The point would have to be borne in mind that local knowledge and local civic pride are highly important elements in the "sales-promotional" drive: if this is successful, spectacular decreases in charges are possible because of the large proportion of fixed costs, however little or much the consumer buys. This does not mean that there is no gain in judicious extensions of area, and amalgamations of undertakings. There are advantages to be had by co-ordinated schemes for skilled advice, technical and managerial, purchases, marketing of residuals, and services to the consumer.

---

[1] Cf. *P.E.P. Report on the Gas Industry*, pp. 67–71.

The factors under discussion were considered during proceedings about the prospective change in the ownership of the Barnsley Gas Company's undertaking in in 1937. It was urged in evidence given before the Select Committee, that Barnsley Corporation ought to be allowed to take over the undertaking since a unit independently supplying 200,000,000 cub. ft. was a sound economic undertaking. Out of six hundred undertakings throughout the country, including non-municipal undertakings, only about one hundred and forty were larger. This figure, it was urged, however, excludes two possibilities: a smaller unit might be able to *sell* the gas produced cheaper, a larger, on the other hand, can make economies in purchases and research. An eminent consulting engineer, speaking in favour of including Barnsley in the Sheffield Gas Company undertaking (sponsors of a "grid" comprising 1291[1] miles of main) argued that the larger unit provides an advantage in the selling organization in regard to such things as the hire-purchase of appliances, general service to consumers, and the regulation of tariffs on a common basis. It was urged in contradiction, that after passing a certain point there is no very great virtue in the purchase of equipment in bulk. As between an undertaking four or five times the size of Barnsley and Barnsley itself, there might be considerable advantages to the former in the purchase of such things as gas cookers, fires, and other appliances, where a scale of discount is given, rising according to the amount purchased. There were also overhead economies that could be made. But clearly there is a limit to these things at some points. As for consumers grumbling outside the area of lower prices, if such an argument were taken without a pinch of salt, there would only be one company in the country, and a nation-wide uniform charge.

---

[1] Birmingham Corporation, 2049 miles; Leeds Corporation, 1454 miles; Coventry Corporation 482 miles; Gas Light & Coke Co., 6172 miles. Year 1938.

It is evident that in the absence of special circumstances such as the availability of coke-oven gas, the optimum area can only be determined by a cautious investigation into the maximum number of consumers, their variety and density, in any contemplated area, and then by pushing out further afield until the total cost of supply threatens to outweigh the advantages obtained. Something of this process has been occurring since 1920. Nineteen companies have been absorbed by local authorities, sixteen local authorities have taken over the undertakings of other authorities, and seven local authorities' undertakings have been absorbed by companies. Such absorption or joint schemes are not possible except within small limits, given the contemporary insistence on self-preservation and self-government by local authorities as shown in the notorious instance of Manchester and Stretford.

The Manchester City Gas Undertaking included an enormous generating plant at Partington. It had a surplus capacity adequately to supply the industrial areas on its south-west, i.e. the Trafford Park area. In 1921 Manchester had bought out the existing Stretford Gas Company and thenceforward supplied the area with gas direct from Partington. But the Borough of Stretford and other neighbouring authorities were, in the same local Act, given an option of acquiring that business for themselves; and Stretford and five other authorities did actually establish an undertaking, known as the Stretford and District Gas Board, in 1922. This Board made fast progress. By 1927 it required an extension of plant, and so applied to the Board of Trade for a Special Order in May. The Partington works could have supplied the existing and predicted demand at highly economical rates. It could have avoided the need of putting up more gas-works which at best are not aesthetic joys in an area with remnants of rural appearance. It was urged in the House of Commons[1] that the calorific content of the Manchester supply was 450 and that of Stretford 500, and that this was an important difference for industrial processes. There seems to be no doubt that Manchester could have supplied what was needed at a cost not higher than that anticipated by Stretford itself, and probably cheaper.[2] Even the Parliamentary Secretary to the Board of Trade took Stretford's side, while Manchester, out of municipal courtesy, did not press its claims. Municipal forces were too strong: the powers that be in Stretford did not want to be under obligation to Manchester. There are many plans for regional government in the Manchester area. Stretford already took its electricity and water from Manchester. A point might come when its total absorption was mooted.

---

[1] Parliamentary Debates, July 8, 1937.

[2] Manchester has a surplus productive capacity of 2,186 million cub. ft., or 24·6 per cent of its effective productive capacity. Cf. Royal Commission on Distribution of Industrial Population, Evidence, p. 798.

In recent years the development of gas production technique and its transmission has brought into public discussion the possibility of a gas "grid." Two developments have caused this: the possibility of generating on a larger scale with transmission by powerful pumping; and the use of coke-oven gas supplied in the colliery districts by firms who make coke. This used to be allowed to escape as waste, but can be purified and sold by gas distributors. In the colliery districts, therefore, it is possible and relatively cheap to establish, by amalgamation or otherwise, a network of supply depending more or less on coke-oven gas. There are also steelworks which can offer raw gas as a by-product. This development has been rapid and important.[1]

Such supplies of coke-oven gas are economical for undertakings near the collieries. The most successful of such "grids" is that encouraged by Parliamentary authority in 1931, administered by the Sheffield Gas Company, and reference to a map will show the geographical condition for this.[2] There is a very close grouping of coke-ovens on a coalfield, the area of supply is dense and the consumers varied. Thus the uncertainties of production and sale are limited,

---

[1] Years 1921–27 from Report of National Fuel and Power Committee, Cmd. 3201, 1928; the rest from the Board of Trade Returns.

The eleven local authorities taking coke-oven gas are Burnley, Chesterfield, Mansfield, Middlesbrough, Nottingham, Ossett, Pontypridd, Rawmarsh, Rotherham, Stoke-on-Trent, Wombwell, Glasgow. Their geographical position explains why they can do this.

	Number of undertakings	Million cub. ft.
1921	14	1,325
1922	16	3,636
1923	16	4,265
1924	18	4,471
1925	21	4,798
1926	22	2,321
1927	24	5,340
1935	40	20,554
1936	40	24,329

[2] Cf. Board of Trade, Departmental Committee on Area Gas Supply, 1930, chaps. x–xiv.

though the former, dependent on a fluctuating demand for coke, has necessitated strict obligations on the part of the thirteen coke-oven owners in the scheme regarding the quantity and qualities of delivery. A further scheme has been sanctioned in West Yorkshire (1938).[1] But an attempt to establish yet another in Scotland failed. The Departmental Committee on Gas Supplies in the West of Scotland (1936) recommended X, Y, and Z to take coke-oven gas. The scheme has not come into operation. Glasgow was unwilling to limit its municipal independence by such arrangements with coke-oven owners.

Undertakings are worried by difficulties of supply. If the demand for coke falls off or steel mills reduce production, coke-oven owners or steel mills may not want to take coke merely for the gas. Only if the price is low enough, then, can the gas undertaking afford an insurance against interruption of supply in a stand-by plant. Labour disputes not under their control might deprive gas undertakings of supply. Thus there are risks in reliance on coke-oven gas—of quality no less than quantity. It may be that local authorities can here and there avail themselves of the opportunities.

The wider question of the gas grid is answered substantially by the considerations put forward by Dr. E. W. Smith at the Fuel Conference of 1928.[2] For a comparatively small quantity of gas, such as 5,000,000 cub. ft. per day, it is cheaper to convey gas and coke distances up to the order of five miles than to rail the coal necessary for gas working purposes. For distances beyond five miles it is cheaper to rail the coal than to convey gas and coke. For quantities about 25,000,000 cub. ft. a day, the limit economically was between twenty-five and fifty miles—about thirty-five miles. Beyond thirty-five miles it is cheaper to convey the coal for gas making. For large quantities of gas of the order of about 50,000,000 cub. ft. per day, it would appear to be cheaper to pump gas and rail coke for distances up to one hundred miles and beyond. There may be some distances greater than one hundred miles at which it becomes cheaper to rail coal. This assumes that the other charges (other than transmission) entering into the cost of production are the same at the colliery and at the area of supply. If, for example, coke-oven gas is used, it might be sold so cheaply, because a good price is obtainable for metallurgical coke, that even with the transmission costs it would be delivered greater distances at economic prices. But the latter possibility is very limited. One other point is of great importance. The sale of coke, one of the principal residues of gas manufacture, is often done most economically in local markets. It is more conveniently distributed where the demand with its special elasticity can be studied and the quantities and prices varied accordingly.

---

[1] Cf. *P.E.P. Report on the Gas Industry*, p. 124.

[2] *Transactions of the Fuel Conferences: World Power Conference*, London, 1928, vol. iii, pp. 828 ff. "Transmission over various distances of Energy in the Form of Coal, Coke, Oil, Gas and Electricity."

The general conclusion must be that only where there is a substantial concentrated demand is the long-distance transmission of gas economical; and that English local authorities are, as to area of gas undertakings, not notably inappropriate.

Chapter Fourteen

ELECTRICITY AREAS

ELECTRICITY AREAS

When electric lighting became established, both in the municipalities and private companies, the first impulse was to prevent the authorities from being too large. But with the development of the technique of generation and the evolution of the distributing cable quite large authorities became possible. An emphatic distinction must be made between two problems included in the problem of the electricity area: one concerns the generation of electricity, the other its distribution. Municipalities had the very great advantage of being established in small, densely populated areas, and were spared the difficulty of being obliged to go out into less populous and less remunerative areas. When, in the course of time, it became necessary for the rural areas to be served, and for power to be supplied on a large scale, Parliament made it possible for power companies to establish themselves with a monopoly of the new untouched areas. Enclaves in these were formed by the local authorities already established, or which by the exercise of the statutory option, could be established. The result of haphazard development was a number of authorities, and a remarkable difference in size and number of units supplied. Further, there was as a result a terrific variation in their character. In 1925 there were 528 undertakings as shown in table on p. 259.

By March 1934 there were 635 separate authorized undertakers, including three joint electricity authorities, five joint boards, 373 local authorities, and 253 companies and persons. These varied in size from a few hundred acres and a few thousand units per year to an undertaking with an area of 5,000 square miles and over 500,000,000 units a year.[1]

Largely as a result of the War, the electricity industry was investigated from the standpoint of the economical use of fuels. The first of such enquiries was undertaken by *The Committee on the Conservation of Coal* (1917), the second by *The Committee on Electrical Trades* (1917), and the third, *The Electric Power Supply Committee*

---

[1] McGowan Report on Electricity Distribution, Ministry of Transport, May 1936, p. 13.

(1918). The general purpose of these committees may be taken from the terms of reference of the last-mentioned. They were "to consider and report what steps should be taken, whether by legislation or otherwise, to ensure that there shall be an adequate and economical supply of electric power for all classes of consumers in the United Kingdom, particularly industries which depend upon a cheap supply of power for their development." Their principal proposals were directed to ensuring some far-reaching co-ordination among the six hundred separate monopolies.

Units sold to consumers	Number of undertakings		
	Public Authorities	Companies	Total
Under 50,000	15	28	43
Thousands			
50 but under 100	15	21	36
100 ,, 250	22	35	57
250 ,, 500	13	32	45
500 ,, 1 million	35	30	65
Millions			
1 but under 2·5	44	27	71
25 ,, 5	44	14	58
5 ,, 10	35	8	43
10 ,, 25	44	13	57
25 ,, 50	20	7	27
50 ,, 100	9	8	17
100 ,, 200	4	3	7
200 and over	1	1	2
	301	227	528

The policy of co-ordination and the revision of areas achieved its first success with the passing of the Electricity Supply Act of 1919. The Act provided for voluntary co-ordination between undertakings in regions which would be constituted by the central authority. Such co-ordination was, owing to the hostility of the House of Lords, made voluntary instead of compulsory.[1]

The central body established by the Act was the Electricity Commission. It was to "promote, regulate, and supervise the supply of electricity," and to exercise the powers first exercised by the Board of Trade and then delegated by it to the Ministry of Transport in 1919. The Commissioners are technical experts appointed by and responsible to the Minister of Transport. The Secretary is the administrator, and the guide, counsellor, and sometimes castigator of the authorized undertakers. He has an unrivalled knowledge of the law and the practice, and the Commission, as a body, has exercised a remarkable energizing influence over the industry. But it was not successful in bringing into existence the regional bodies which were one of the principal reasons for its establishment. Even up to the present there are only three Joint Electricity Authorities and five Joint Boards.[1]

---

[1] Cf. Parliamentary Debates, House of Lords, December 8, 1919. The then Lord Chancellor, Lord Birkenhead, twitted their Lordships with not having read the Bill! Their Lordships were very angry.

The Commission, finding that private enterprise and municipal undertakings are very difficult to persuade into joint schemes, turned its attention to other means of improving the industry. In the course of giving powers to borrow, or to permit bulk supply agreements between undertakings, or to revise existing systems, or to utilize meters, they have introduced small measures remedial of unreasonable situations. Their power to make enquiries, to collect financial and technical data, gave them an insight into an untenable situation which could only be remedied by firmer law. In 1921[2] they observed that the small areas of supply had resulted "in unnecessary expenditure of capital, wasteful consumption of coal, and generally higher charges for electricity than would have been the case had there been larger areas of supply." "Owing to the small size (in many cases) and relatively high running costs of public stations, manufacturers have been compelled in the interests of their business to adopt the unsatisfactory source of installing their own generating plant, thus extending the wasteful system of generation on a small scale in a multiplicity of small stations."

The next stage was decisive. The Weir Committee of 1926[3] severed the two problems of production and distribution, and dealt with production, the issues in which are more capable of convincing explanation. They looked to the closing down of all but a few large stations which would generate enough to distribute in bulk to the supplying authorities, and to the standardization of frequency. The recommendations were embodied, with various minor modifications, in the *Electricity (Supply) Act of 1926.*

---

[1] Infra, pp. 275–77. [2] First Annual Report, Electricity Commissioners, p. 9.

[3] Ministry of Transport, Report of the Committee appointed to review the National Problem of the Supply of Electrical Energy, 1926.

There was established at the centre the Central Electricity Board.[1] It consists of a chairman and seven members, appointed by the Minister of Transport for terms of from five to ten years, subject to reappointment. Members may not be simultaneously Members of Parliament, nor have any financial interest in any company supplying or generating electricity or manufacturing or selling electrical machinery or plant for use in generation and transmission. The Minister has, in fact, appointed men expert in industrial administration, finance and the management of large industrial groups, and those with a knowledge of labour, the railways, local authorities, and the supply companies. It is the business of the Central Electricity Board to select certain stations in which to concentrate the generation of electricity for public supply systems; to connect the selected stations to each other and to the transmission system of the undertakers, by the construction or acquisition of transmission lines; to arrange for extensions and alterations of the selected stations already existing and for the construction of new selected stations by authorized undertakers when necessary; to standardize frequency throughout Great Britain; and to supply, directly or indirectly, any undertaker requiring electricity. The problem of the price it charges is discussed in Chapter Sixteen.

The Central Electricity Board is financed by the issue of stock bearing no rights to vote.[2] The principal and interest may be guaranteed by the Treasury up to a total of £33,500,000, but no use has been made of this guarantee so far. The Board may borrow to the maximum of £60,000,000 with the consent of the Electricity Commissioners, and the amount actually borrowed is about £63,000,000. The Board's expenditure on capital purposes is applied to the establishment of the grid and the standardization of frequency.[3] The interest on the capital allocated to the standardization of frequency is paid by the Electricity Commissioners, which makes a levy on the industry, as the cost of scrapping the plant and equipment and its replacement by new equipment is a charge on the whole of the industry. The derivation of its revenue is considered later, when we discuss electricity charges.[4]

---

[1] Described in Robson (Editor), *Public Enterprise* (George Allen & Unwin Ltd.), article by G. Haldane, "The Central Electricity Board"; Gordon, *The Public Corporation in Great Britain* (1938), chap. iii; and in Wills, *Electricity Supply* (1937).

[2] Cf. Report on the Supply of Electricity in Great Britain, December 1936, by Political and Economic Planning.

[3] The total cost of standardization is estimated between £16 and £18 millions.

[4] Chapter Sixteen, infra.

The Electricity Commission plotted the country into regions, surveyed the generating stations in them, selected the most efficient, and after scheduling a small number for operation during a transition period, scheduled the rest to be closed in the course of time. It settled the details of the transmission system, linking up the selected stations, and, in order to draw up a programme of extensions of the selected stations to meet the probable increase in demand, it made a ten-year forecast. With the plans of the Commissioners before them, the Central Electricity Board proceeded with the establishment of the scheme.[1] There are ten chief regions, each with a diversity of industries. In the place of over 500 generating stations there are now 132; when the scheme is complete there will be 144. Generation is chiefly carried on by the larger stations, while others run only during the peak period and close down altogether during week-ends, when the industrial consumption is small or non-existent, or in summer when there is only a small consumption of lighting and heating. Further, at various points—280, to be exact—the grid can be tapped for main distribution purposes. In each of the areas there is a Control Room in an appropriate location connected by special telephone with the generating stations and the grid points. The engineer is in constant touch with the undertakings, in order to vary as and when necessary the established programme of supply and to use the most efficient stations to the greatest advantage. It is from this system that the undertakers buy their supplies for distribution to the individual consumers, on terms which will be discussed later.

It is proper, at this point, to observe the general economies brought about by this system. The basic economy is the much better utilization of the capital investment in the generating stations. This is a direct corollary of the load-factor. The fundamental technical quality of electricity, equal in importance in water administration to the fact that water runs downhill, is the fact that electricity cannot be stored. This also marks off the nature of electricity areas from that of gas, which can be stored. Therefore, it is important, if the full use of the fixed capital is to be secured, to be able to load the generating plant all day and every day with the load that must be allowed for to supply when demand is at its peak. What is required is to get the highest "load-factor" possible. This is definable as the actual consumption of energy divided by the consumption which would have occurred had the maximum power been taken all the time. There is something resembling load-factor in almost every form of production; in machinery, ships, lodgings, taxi-cabs, and almost all forms of capital which are necessarily idle during some periods.[1] The longer they are idle the less their earning-power, although they continue to eat up interest, depreciation, and certain unavoidable charges like rates, insurance, etc. Therefore one must aim at the increase of the time of its use in relation to the time of its non-use. This is peculiarly marked in electrical equipment in relation to the demand. To achieve a load-factor which equals unity it is essential to secure that diversity of demand which will keep the plant going all the time at the point of its maximum. Diversity of demand, as we indicated earlier, is important enough in gas supply; it is of even more importance in the case of electricity because there is no storage to meet peak demands. But diversity of demand is precisely what a small area, unless it has an exceedingly dense and varied population, cannot achieve. Some places may supply lighting for a few hours in the morning and evening; others heating at midday, tea-time and evening; others industrial power, which is shut off at week-ends and holidays. The ideal is to get a great diversity.

---

[1] Cf. Annual Reports, 1927, to date: these (published by Whitehead Morris Ltd., Tower House, Holland Street, S.E.1) give the history and statistics of the Board's activities.

The areas plotted by the Electricity Commissioners have had this in mind. The North-East Region, for example, included shipbuilding, marine engineering, iron and steel, and chemicals and coal mining; the North-West, textiles, coal mining, iron and steel, shipbuilding, engineering, chemicals, papers, grain milling, seed crushing, tanning, and soap making, etc. The other areas which show at least as much diversity of non-domestic uses of electricity as these, have like these, also, the domestic load for lighting, heating, and small power.

The concentration of the making of electricity in a relatively few generating stations has made it possible to dispense with the reserve plant which formerly had to be maintained by the various undertakings in case of a breakdown of the principal plant. In 1931 over 45 per cent of the total plant was held in reserve. It is estimated that when the new transmission system is complete, the proportion can be reduced to 15 per cent. Moreover, the generation of electricity has been concentrated in those stations which have been selected precisely because they are the most efficient.[2] There were (and there still are, but very rarely) stations in which the equipment was quite antiquated, as this term is understood in electrical engineering, whose rate of progress has in the last two decades been remarkable. It is estimated, for example, that in 1935 the average fuel consumption of the grid-generating stations was 89 per cent of that of such stations when operating independently before 1932, a saving of nearly £1,000,000 in the cost of operation for the year 1935.

---

[1] Bolton, *Electrical Engineering Economics*, 1936, p. 217; and *Costs and Tariffs in Electricity Supply*, 1938.

[2] Among the chief owned by municipalities are Liverpool, Sheffield, Birmingham, Leeds, Bristol, Edinburgh, Manchester, Hackney, Brighton, Kingston-on-Hull, Croydon, Battersea, Oldham, Fulham, all outstanding examples of efficiency.

Already, to the end of 1935, about £11,500,000 had been saved in new capital for generating plant as a result of the establishment of the grid, and it is computed that in a few years' time the saving will amount to nearly £30,000,000. There is also the further remarkable economy which comes from shouldering the most difficult responsibility of all, namely, the need to guess at the generating power needed to meet the probable future demands of various kinds. Instead of the calculation and assumption of the risk resting on a multitude of relatively small units, in each of which the element of uncertainty was necessarily high and often disconcerting, there is now a co-related gathering together of sufficient factors by the big stations to diminish the risk of local mistakes. Those who own the stations have their entire output taken by the Central Electricity Board, and their yearly capital charges and interest guaranteed by it.

The Central Electricity Board has not been concerned merely with the physical duty of establishing the stations and the transmission lines, but has thrown itself with a remarkable vigour into the psychological task of inducing people to consume more. It has fostered rural schemes of supply, and it has even lent its weight, judiciously, to the movement for slum-clearance, on the theory that every new house is a potential consumer of electricity. It has also explored and fostered the application of electric power to agricultural processes.

So much for the problem of generating electricity. The old areas, numbering 600, have been reduced in fact to 8, and the former 600 stations to roughly 140.

DISTRIBUTION

Matters have been more difficult in the case of distribution. Here the legislator is not concerned with a perfectly clear and separable technical factor, as in generation. There is the problem of judging the density and location of the consumers, the varieties of demand, the daily and seasonal fluctuations in demand, and the salesmanship necessary to investigate and secure that organization and development in them that may increase business. This subject has been discussed from time to time piecemeal by enquiries conducted under the aegis of the Electricity Commissioners, for example, the enquiries of 1925 and 1930 into Electricity Tariffs, and that of 1930 into the sale and hire-purchase of appliances and assisted wiring. The subject was dealt with comprehensively in the enquiry conducted in 1935–36 by the McGowan Committee ("Report of the Committee on Electricity Distribution," May 1936).

ELECTRICITY UNDERTAKING LOAD FACTOR, 1935–36

Load factor	Number of undertakings		
	Public authorities	Companies	Total
Under 10 per cent	—	1	1
10 per cent and under 15 per cent ..	4	5	9
15 per cent and under 20 per cent ..	8	33	41
20 per cent and under 25 per cent ..	66	65	131
25 per cent and under 30 per cent ..	100	64	164
30 per cent and under 35 per cent ..	121	29	150
35 per cent and under 40 per cent ..	41	26	67
40 per cent and under 45 per cent ..	19	12	31
45 per cent and under 50 per cent ..	7	10	17
50 per cent and over	3	7	10
Total	369	252	621

SOURCE: Annual Report of the Electricity Commissioners.

This Committee observed that the multiplicity of undertakings involved a multiplicity of boundaries, and this, resulting in different tariffs, systems of supply and facilities, often on opposite sides of the same street, had led to an outcry for uniformity. They observed that there were 282 undertakings supplying alternating current, 283 supplying both this and direct current, and 77 supplying direct current only. There are as many as 43 different voltages, ranging between 100 and 480 volts. The result of the number of areas is their smallness, and a variety of financial capacity, load factor and methods of supply and facilities which make it impossible to enjoy the economies undoubtedly available from contemporary technology. Many of these areas simply have not the diversity of load which is fundamentally necessary for the economical use of capital. Moreover, because of its own smallness the small undertaking cannot secure such a load, since it is unable, owing to high distribution costs, to offer attractive prices or to incur capital commitments lest a discontinuance in consumption were to impose a crippling burden on it. They are not in a position to take financial risks the return for which will be a long time coming. Thus they are placed in a vicious circle; a load factor which does not invite capital expenditure and capital expenditure which cannot attract a better load. As we saw in the case of gas undertakings, the larger undertakings may benefit from bulk purchasing of such things as cables, apparatus, meters, and the rest. Small local authorities have been in the habit of making their own specifications in order further to develop idiosyncrasies which have their roots in the past.

Nor is it possible in small areas to offer careers attractive to the cleverer of the technicians and salesmen. It has long been a principle that where it is possible to concentrate several processes of manufacture of supply in the hands of one large authority, it is possible to obtain the economies of division or specialization of labour. Instead of the wasteful territorial division or disintegration of a service, one proceeds to the functional division of departments each managed by a specialist. Instead of the harassed factotum attempting everything, and in spite of strenuous efforts not doing too well, every expert has his own job and responsibility, naturally requiring a co-ordinating manager.

The anomaly of areas is seen very clearly in the London and Home Counties Electricity District. It contains a population of more than 9 millions, contains eighty-three separate undertakings, forty-four of which supplied (1934) direct as well as alternating current. Despite some years of collaboration, the differences in charge were still enormous, as also in voltages.[1] The division of the Metropolitan and other boroughs is entirely historical, and from the angle of electricity purely arbitrary. The line severs districts which are one. There are forty-four municipal undertakings in the Greater London area, and their sale of units indicates the variety of size:

Million Units per annum	(1933–34)
1 to 10	10
10 to 21	14
25 to 50	13
Over 50	7

---

[1] Cf. Statement of Published Tariffs.

In 1937–38 the sizes of supply authorities were:

ELECTRICITY

CLASSIFICATION OF UNDERTAKINGS ACCORDING TO NUMBER OF UNITS SOLD TO CONSUMERS, 1937–38

Units sold to consumers	Number of undertakings		
	Public authorities	Companies	Total
Under 50,000	1	2	3
Thousands:			
50, but under 100..	2	3	5
100, but under 250..	3	20	23
250, but under 500..	16	20	36
500, but under 1 million	33	25	58
Millions:			
1, but under 2·5..	40	48	88
2·5, but under 5	48	24	72
5, but under 10	51	22	73
10, but under 25	63	33	96
25, but under 50	39	10	49
50, but under 100..	43	9	52
100, but under 200..	15	7	22
200 and over	10	11	21
TOTAL	364	234	598

SOURCE: Annual Report of the Electricity Commissioners, 1937–38.

All these considerations lead to the conclusion that larger or, at any rate, different areas are needed. There are, as we show in our statistical analysis, several quite small undertakings which have adopted a progressive policy and show the arithmetical signs of success, the chief of which is low charges. These, no doubt, would resist inclusion in a larger area.[1] From a careful personal investigation of the situation within the London area, we know the anxiety felt by the highly successful and capable boroughs about entering an amalgamation scheme in which the load is poorer, the general policy of selling less well conceived. Yet, as the McGowan Committee pointed out, there is the national economy to be considered. "We are satisfied that a substantial measure of simplification and co-ordination of the present structure is necessary if the fullest measure of development is to be achieved throughout the country in the future."[1] It is in the light of this paramount principle that the small and brilliant areas may have to come under a regrouping. But it is highly important to emphasize the point which is made most emphatically in the Report of *Political and Economic Planning* on the "Supply of Electricity in Great Britain" (December 1936). It says:

---

[1] Cf. "Metropolitan Boroughs Protest," *Municipal Journal*, August 1937.

> "The P.E.P. view on this point is more cautious. It is suggested that the first step should be to find out the relative efficiencies of different undertakings. Any schemes for changes, either in control or size of areas, and the form of any amalgamation, should be decided according to the efficiency of an undertaking for giving a full and economic public service."

This coincides with the view which emerged in the discussions on the areas of water supply (the need for having regard to local supplies) and the caution necessary in the extension of the area of supply of a gas undertaking. The table on pp. 270-71,[2] showing size in relation to manufacturing and distributing costs, while revealing the main truth that as size increases costs decline per unit, also shows a considerable divergence between size and costs in individual comparisons between undertakings in each of the eight groupings.

It is perfectly clear that size is not the direct and exclusive index of efficiency, and the controlling factor, in determining whether an amalgamation or an extension is desirable, should be the latter and not the former. Particularly is the recommendation of the McGowan Committee to compel the absorption of all undertakings selling less than 10,000,000 units a year to be accepted with reserve. Such a limit may not do justice to cases well below the border line. It has even been seen that some large undertakings do not have sufficient regard for their own outlying areas. It has been recognized as one of the merits of the compact, if not the too small local authority, that the manager and the committee have a most vivid personal knowledge of and interest in the whole of the area. Hence the actual making of the new area must proceed on a cautious calculation of all the factors making for efficiency as defined by the McGowan Committee itself in paragraph 6 of its report, in which the psychological factors in management and salesmanship are stated.

In August 1937 the Government published a document called *Outline of Proposals*. This contained a grouping of Distributive Districts, and a procedural and financial basis for the amalgamations, which constituted in essence the Government's proposals for coping with the problem of the distribution of electricity. The proposals fall into two chief categories, the principles relating to size and organization, and the financial basis of the change-over from the present organization to that proposed. While the financial basis is important as affecting future prices of electricity and the fortunes of individual municipalities and companies, it is not important in our particular context.[1] We are here concerned with the proposals of the reform of electricity distribution districts. There is to be a regrouping of areas. In the making of such schemes the Electricity Commissioners will take into account primarily "that a substantial reduction in the present number of undertakings (with the complete elimination of all duplicate powers) is to be effected by the substitution where appropriate of larger and more economic units; that the area of supply of each such unit should be sufficiently large to embrace a reasonable diversity of demand and to ensure that future technical development can proceed on comprehensive and economic lines, and should where possible include an appropriate grouping of rural and urban areas; and that the unit should have adequate financial resources for such development."[2]

---

[1] P. 20.

[2] Computed from *Electricity, Engineering and Financial Statistics*, 1936–37.

There are three bases for compulsory amalgamation of undertakings by the Electricity Commissioners. Basis A provides for the acquisition by the undertaker of the other existing undertakings and parts of undertakings in the area delineated. The most considerable undertaking would no doubt acquire the rest, and this means that in some cases municipal undertakings would acquire other municipal undertakings and companies, while in other cases companies would acquire municipal undertakings. Basis B envisages the transfer of all undertakings to a newly constituted Distributive Authority. The now familiar type of Public Board, like the London Passenger Transport Board or the Central Electricity Board, would be taken as the constitutional machinery of administration. The *Outline* proposes that each Distribution Authority shall consist of between seven and twelve members appointed by the Minister of Transport after consultation with the local authorities and organizations representative of industry and agriculture in the area. The Minister would fix the term of office and remuneration of the Chairman and the members of the authority. Basis C includes the transfer of the undertakings of

---

[1] Cf. on this subject the brilliant address by Mr. S. Larkin on "Electricity Distribution," *Proceedings, Annual General Meeting, I.M.T.A.*, June 1938.

[2] *Outline of Proposals, Electricity Distribution*, paragraph 10 (*a*).

COST OF DISTRIBUTION IN CERTAIN MUNICIPAL ELECTRICITY UNDERTAKINGS FOR THE YEAR 1937

Size of undertaking in terms of sales (ex bulk)	Undertaking	Total working costs	Cost of generation and energy purchased	Cost of distribution		
1,000 kWh.		£	£	£	Pence per unit sold	
29	Tobermory Corporation	461	255	206	1·70	0·92*
93	Betts-y-Coed U.D.C.	1,079	725	354	0·91	
187	Calne Corporation	2,619	1,310	1,309	1·68	
249	Llanfairfechan U.D.C.	2,064	1,264	800	0·77	
318	Ruthin Corporation	4,993	1,669	3,324	2·52	
355	Lyme Regis Corporation	4,257	2,778	1,479	1·01	
489	Connah's Quay U.D.C.	4,052	2,309	1,743	0·86	
534	Llandrindod Wells U.D.C.	5,202	3,122	2,080	0·94	
651	Colne Valley U.D.C.	4,088	2,817	1,271	0·48	
746	Marlborough Corporation	5,327	3,073	2,254	0·72	
888	Barry U.D.C.	9,201	4,647	4,554	1·22	
951	Hindley U.D.C.	6,407	4,655	1,752	0·43	
1,277	Oban Corporation	7,914	4,707	3,207	0·60	0·78*
1,793	Seaham U.D.C.	15,685	8,742	6,943	0·94	
1,978	Neath Corporation	19,905	14,060	5,845	0·71	
2,209	Whitby U.D.C.	13,467	6,362	7,105	0·77	
2,477	Horley U.D.C.	9,975	6,620	3,355	0·32	
2,709	Bangor Corporation	19,298	11,356	7,942	0·70	
3,019	Bridgend U.D.C.	25,967	14,247	11,720	0·93	
3,668	Buxton Corporation	20,197	8,883	11,314	0·74	
4,070	Felixstowe U.D.C.	25,701	10,487	15,214	0·89	
4,307	Inverness Corporation	22,702	12,223	10,479	0·58	
4,598	Winchester Corporation	40,566	13,984	26,582	1·39	
4,940	Newcastle-under-Lyme Corporation ..	24,672	14,106	10,566	0·51	
5,566	Aldershot Corporation	28,880	16,061	12,819	0·55	0·51*
6,025	Haslingden Corporation	20,240	12,454	7,786	0·31	
6,998	Colne Corporation	39,244	19,794	19,450	0·66	
7,217	Hamilton Corporation	29,845	14,620	15,225	0·50	
8,214	King's Lynn Corporation	51,246	30,616	20,630	0·60	
8,971	Mansfield Corporation	48,922	30,492	18,430	0·49	
9,170	Bexhill Corporation	47,152	25,972	21,180	0·55	
9,574	Sale Corporation	41,472	25,969	15,503	0·39	
10,004	Epsom U.D.C.	55,914	34,385	21,529	0·52	0·42*
13,483	Tynemouth Corporation	61,112	43,018	18,096	0·32	
15,292	Dartford Corporation	58,330	41,775	16,555	0·26	
16,636	Scarborough Corporation	95,075	44,828	50,247	0·72	
17,243	Stafford Corporation	62,490	47,468	15,022	0·21	
18,078	Bethnal Green Corporation	98,044	47,841	50,203	0·66	
19,857	Middlesbrough	104,388	59,377	45,011	0·54	
21,475	Kingston-on-Thames	86,263	58,463	27,800	0·31	
23,677	Chesterfield Corporation	73,250	44,029	29,221	0·30	
25,374	Wallasey Corporation	117,506	78,254	39,252	0·37	0·35*
29,848	East Ham Corporation	156,044	78,426	77,618	0·62	
33,684	Shoreditch Corporation	159,091	99,673	59,418	0·42	
36,737	Accrington Corporation	78,954	63,273	15,681	0·10	
38,682	Maidstone Corporation	117,466	63,947	53,519	0·33	
40,453	Lancaster Corporation	134,506	77,981	56,525	0·33	
45,047	Blackburn Corporation	153,104	87,754	65,350	0·35	
55,935	Blackpool Corporation	215,114	123,847	91,267	0·39	0·30*
60,496	Battersea Corporation	192,361	114,760	77,601	0·31	
69,921	Kettering U.D.C.	190,563	136,282	54,281	0·18	
75,808	St. Helens Corporation	190,519	131,576	58,043	0·18	
86,144	Derby Corporation	287,490	170,897	116,593	0·32	
98,389	Brighton Corporation	422,824	246,928	175,896	0·43	
119,853	Birkenhead Corporation	355,005	229,768	125,237	0·25	0·20*
131,529	Cardiff Corporation	307,056	183,296	123,760	0·23	
160,912	Wolverhampton Corporation	378,787	276,611	102,176	0·15	
238,114	Bristol Corporation	732,141	483,759	248,382	0·25	0·25*
458,224	Glasgow Corporation	981,875	652,832	329,043	0·17	
474,636	Manchester Corporation	1,719,398	909,410	809,988	0·41	
542,293	Sheffield Corporation	1,050,654	741,117	309,537	0·14	
766,566	Birmingham Corporation	2,204,444	1,309,951	894,493	0·28	

* Weighted average of previous column.

two or more local authorities to a newly constituted Joint Board, "where local authorities express a desire to be formed into a Joint Board and the Electricity Commissioners are satisfied that an adequate improvement can be effected in that manner." Small areas intervening between or adjoining those of the local authority undertakings concerned may be brought within the scope of the scheme.

In respect of any scheme made on any of these bases the Electricity Commissioners will be required to satisfy themselves that economies will result from more efficient technical operation, capital expenditure on future development, convenience of administration, and that the economies will be passed on to the consumers in the form of reduced prices, and that consumers will not be prejudicially affected as regards regularity and efficiency of supply.

The Electricity Commissioners themselves suggested Districts and Groupings. The latter number sixty-eight for England and Wales and fall into twenty-five Districts.[1]

Whichever basis is adopted, "municipal" enterprise will be transferred. Where a local authority acquires other undertakings, there will be a large new super-municipal authority, with the "core" authority assuming responsibility for the acquired areas. Some representation of the consumers in these areas would be needed. The whole undertakings must be weakened to some extent in the existing dependence on the force of municipal elections. Where a company acquires the undertakings ratepayers' and consumers' control will give way to control by statutory price-fixing and the Minister of Transport and the Electricity Commissioners. Joint Boards of local authorities also weaken democratic controls. The "Public Authority" was actually invented in order, among other things, to make the administration less dependent upon popular and partisan pressure.

We reserve judgment on the expediency of the proposals for the concluding chapter. Meanwhile the attitude of the municipalities is worth observing. A number of small authorities, those that felt their existence threatened, have proposed or begun negotiations for amalgamation with Joint Boards. Thus, Brighton and district; Doncaster and Adwick-le-Street; Bridlington, Whitby, and Scarborough.

Further, the various associations in the field of local government have forcefully protested.[2] A review of their attitude is instructive.

---

[1] Cf. Appendix A.

[2] Cf. the interesting comments of P.E.P. in *Planning*, No. 115, January 25, 1938.

The Association of Municipal Corporations (special committee reporting upon this) says:[1]

> "In particular, we see strong objection to the departure from the general principle of public ownership, of electricity undertakings, which (except in the case of power companies) has been adopted by Parliament in all legislation for the last fifty-four years. The principle is supported upon the following, amongst other, grounds: (*a*) that the undertaking is conducted solely for the public benefit and not for the benefit of shareholders; and (*b*) that provision is always made for the repayment of capital. . . . No local authority should be required to part with the undertaking . . . unless it is shown conclusively that the consumers in their area will thereby derive a definite and substantial benefit, and unless that object cannot be obtained by an alternative method."

They stand out against the view that size alone should settle the area. Subsequently, on the adoption of this report (May 1937) the Association supported the continuance of the right of local authorities to purchase the undertakings in their area.

The Incorporated Municipal Electrical Association declared itself opposed to amalgamations in the wholesale way proposed by the Government; that benefits to consumers could only be expected from a reconstruction based "on a much larger measure of public ownership and control than that which consists at present"; that a central authority should be established with overriding authority similar to those exercised by the Ministry of Health over public health authorities (!). The Association of Municipal Corporations dissented from this third point; and the dissent brings into relief an instructive difference between the Corporations and the Electricity Departments and Committees of the Corporations.

The Lancashire meeting of non-county boroughs and urban district councils[2] resolved that "all electricity undertakings should be under municipal ownership and control; that the identity of all efficient undertakings (large and small) should be preserved; that the proposed grouping should be considered by representatives of the undertakings within the groups, and that there should be no scheduling of grouping by undertakings inserted in the proposed Bill; in the event of it being necessary for the Electricity Commissioners to prepare schemes for the amalgamation, the undertakings should constitute a Joint Board or a committee of representatives of existing undertakings." The Rural District Councils[3] favour, at the most, transfer to Joint Boards, subject to appeals to the Minister or other controlling authority, if each constituent body does not provide for adequate development. They believe that existing undertakings should be left alone if "large enough to afford cheap supplies of electricity and small enough to enable the undertakers to know the consumers." The Smaller Municipal Electric Supply Undertakings Association insist on the retention of municipal ownership and identity of the undertakings "if efficient, irrespective of size."[1] They concede only the necessity for Joint Boards for particular areas for co-ordination and standardization of development. They would impose on the several undertakings a high degree of uniformity in bulk supply charges and the development of rural areas, and all authorities would be required to establish a standard basis of tariffs, conditions of supply, hire and hire-purchase of apparatus, assisted wiring. They would secure the cabling of streets in all built-up areas and the standardization of voltages.

---

[1] Cf. *Municipal Review*, November 1936, p. 398.

[2] Cf. *Municipal Journal*, 1937, p. 1419.

[3] Cf. ibid., p. 1562.

The insistence on the maintenance of the "identity" of the undertakings is extremely interesting. So also is the belief expressed many times since the issue of the McGowan Report and the *Outline of Proposals* that municipalities look not to "profits" but the interests of the consumers. We consider these terms in other chapters.[2]

RURAL SUPPLY

We cannot leave the problem of areas of electricity supply without some mention of the rural areas. Municipal undertakings began and developed in the populous centres, and though they have been prepared and often anxious to go beyond their own areas, nevertheless the rural districts have been left rather neglected both by them and private undertakings. The heavy cost of high-voltage mains, transformers, and low-voltage mains in relation to the low density of the population, and the small revenue derivable therefrom, have naturally been the obstacles to a policy of rural electrification. This problem can only be solved with any thoroughness by a proper reconstitution of areas, and the placing of responsibility on the undertaker in this area for the supply to all consumers. We deal with this in the section on charges for electricity.[3]

---

[1] Cf. *Municipal Journal*, 1937, p. 2455.

[2] "Administrative Organization" and "Pricing."

[3] Infra, Chapter Fifteen, pp. 346–47.

JOINT ELECTRICITY AUTHORITIES

Joint Electricity Authorities are based upon the Acts of 1919 and 1922. Their constitution is laid down by Section 6 of the former. Each Authority must be comprised of representatives of:

> "Authorized undertakers within the Electricity District, either with or without the addition of representatives of the Council of any County situate within the Electricity District, local authorities, large consumers of electricity, and other interests including the persons employed in connection with the supply of electricity."

Joint Electricity Authorities are established by an Order of the Electricity Commissioners, approved by the Minister of Transport, and confirmed by Parliament. The Order sets out in detail the representation of the various interests, the method of appointment or election of each class of representative, and its financial basis, capital, and price-fixing conditions. The Authorities are at least as heavily governed by the Electricity Commissioners as the ordinary local authorities.

The Electricity Districts of the Authorities have been designed to include urban and rural areas. It was the intention of the Acts to secure the complete amalgamation of the undertakings within the Districts, but this has not been achieved owing to the will to independence of various municipal and company undertakings, particularly in the area of the London and Home Counties. Even so, great advantages in quality of service, reduced charges, costs, and availability of supply have followed the establishment of the Authorities.

Only four Joint Electricity Authorities and three Joint Advisory Boards have so far been established. In view of the resistance of individual municipal and company undertakings, and the non-compulsory powers of the Commissioners, more was impossible. There are five Joint Boards which were established under earlier public or private Acts. The Authorities may be operative bodies, and three out of the four are such. These are the London and Home Counties, the West Midlands, and the North-West Midlands. The first covers an area of 1,841 square miles, including the City and County of London. There are[1] forty-five municipal and thirty-six company undertakings grouped under it. It supplies about 164 million units directly to consumers over an area of 190 square miles in Middlesex and Surrey, and 568 million units in bulk to fourteen undertakings within its District.

---

[1] For year 1938.

It holds compulsory purchase rights over all the Company undertakings operating in the City and County of London and over some of the undertakings outside the County. The West Midlands Authority, covering a district of about one thousand square miles, generates the whole of the public supply for its area, sells about 420 million units in bulk to the various distributors within the area (Wolverhampton, Walsall, West Bromwich, Shrewsbury Corporations, and Midland Electric Co.), and distributes 22 million units in detail to about one-half of the consumers, dwelling in the more sparsely populated part of the District, mainly Shropshire. The North-West Midlands Authority distributes in bulk only. It covers 629 square miles, and sells over 130 million units a year to a number of boroughs, urban and rural districts.

There are five Joint Boards. They comprise two or more neighbouring local authorities, and are not very large. They are operative bodies, carrying out the functions elsewhere vested in a single municipality. Advisory Boards, of which there are only three, cover a wider area than the Joint Boards, but they have only advisory powers. They have succeeded in bringing about some minor co-ordination among the authorities represented.

The governing body of the Joint Electricity Authorities is necessarily large. The London and Home Counties Authority has thirty-seven members, and the West Midlands twenty-three. There is a considerable, but by no means complete, change in representation at each triennial election. The majority of the members are members of the local authorities within the District, and they are appointed by these authorities. These are frequently the Chairman of the municipal electricity committee. Sometimes the Chairman or the Mayor of the Council is appointed. Apart from the muncipal representatives, there are representatives of trade unions. Apart from the latter, therefore, who include technical experts chosen by their firms, the bodies are composed of laymen. Since the area of operations is large, there is always the risk that the average member is only concerned to see that the plans of the Authority do not threaten the local authority he represents or to secure some particular advantage for it. Such an attitude is not effective in retarding the current and ordinary work of the Authority. The sincerity of a few members and the advice of the expert officials act as correctives. But any scheme involving the independent operation of the distribution side of supply by a local authority or a company meets with great resistance. There is no friction on questions like the extension of a generating station, or the construction of a new one or of a main transmission line, the development of electrical and related commercial services, the fixing of tariffs, and the method of raising capital. But hardly any progress can be made at all in questions like the standardization of tariffs[1] through the District, of terms for hire and hire purchase of apparatus, of systems and pressures of supply, the exercise of compulsory purchase rights over the undertakings within the District, whether capital raised shall be of the fixed interest-bearing type, the relationship of electric supply to the rest of social administration in the District, the development of rural supplies, and the relationship between electricity and other forms of power and light.

Hence, the composite Authority has had a limited range of effectiveness. It will be noticed that there seems rather too much than too little "democratic" control exercised by the municipal representatives. Lastly, those experienced in this field, admit that the largeness of the area tends to militate against the swift and effective power of protest and remedy exercisable by a municipal councillor to deal with negligence or apathy on the part of its own local undertaking.

---

[1] Cf. Graeme Haldane's article, "Central Electricity Board," pp. 144 ff., in Robson (Ed.), *Public Enterprise.*

Chapter Fifteen

TRANSPORT AREAS

TRAMWAYS, TROLLEY-BUSES, AND PETROL BUSES

PERHAPS the best statement of the technical economy of areas in transport is to be found in the Reports of the General Managers of the eleven authorities in South-East Lancashire and East Cheshire, which in 1937 considered the formation of a single joint transport board for that area. After five years of negotiations that Board seems to be as far from establishment as at the beginning. It would have included Manchester, Oldham, Bolton, Bury, Rochdale, Salford, Leigh, Ashton-under-Lyne, and Stalybridge.[1]

The managers observed that there should be no arbitrary boundary to traffic. The guiding principle was the convenience of passengers in the greater area. The design of a plan for all routes should be that of a wheel, with Manchester its hub. This would permit more through routes and cheapen the fares. The planning of arrangements for special events like football meetings and sporting events would be far easier for one centrally situated authority than for nine dispersed authorities. Joint management would eliminate the nine reserves of trams and buses that were necessarily kept for the times of the greatest demand, or to provide for accidents. The staff necessary to maintain the overhead electrical equipment would be reduced and the nine depots for the repair of the maintenance and renewal of the permanent way, and the nine separate and large workshops could be economically rationalized. Joint administration would make possible the standardization of new rolling stock. It would eliminate the variations in wages—variations which existed in spite of the fact that the inter-running powers brought the different bodies of employees over the same lines with the same passengers going between the same destinations. There would be enhanced strength for the operation of motor-buses; cheaper purchases of materials; tickets would be inter-available, with a unification of the rules regarding children's fares, return fares, and charges for parcels, luggage, dogs,

---

[1] Summary and Reports of the General Managers, Town Clerks, and Treasurers of Authorities concerned in the Proposal. Courtesy of the Town Clerk of Manchester.

ROUTE MILES OPEN TO TRAFFIC AND WORKED UNDER RUNNING POWERS

(*a*) TRAMWAYS

Year	Local authorities			Company undertakings			All undertakings		
	Single track miles open for public traffic (1)	Route length worked under running powers (2)	Percentage (2) of (1)	Single track miles open for public traffic (1)	Route length worked under running powers (2)	Percentage (2) of (1)	Single track miles open for public traffic (1)	Route length worked under running powers (2)	Percentage (2) of (1)
1930–31	3,059	347	11·3	756	61	8·1	3,815	408	10·7
1937–38	1,723	61	3·5	137	11	8·6	1,860	72	3·9

(*b*) TROLLEY-BUSES

Year	Local authorities			Company undertakings			All undertakings		
	Route length in miles (1)	Route length worked under running powers (2)	Percentage (2) of (1)	Route length in miles (1)	Route length worked under running powers (2)	Percentage (2) of (1)	Route length in miles (1)	Route length worked under running powers (2)	Percentage (2) of (1)
1930–31	152·98	8·52	5·6	40·72	0·80	2·0	193·70	9·32	4·8
1937–38	351·66	38·12	10·8	93·57	9·03	9·7	445·23	47·15	10·6

SOURCE: Ministry of Transport Returns relating to Tramways, Light Railways, and Trolley-buses.

etc.; fares would be unified; and the joint authority would be big enough to benefit from the economy of carrying its own insurance risks.

Now, the fundamental nature of a transport system, equivalent to the force of gravity in water, and the load factor in electricity, is a combination of speed with unbroken continuity of movement to the desired destination. The extension of the area benefits both the internal circle and the outlying districts—providing the right financial terms and routing arrangements can be made. The important practical question, as in the other undertakings, is at what point the boundary shall be drawn, and which kind of transport, for there are three kinds, shall be used.

The first entrant was the tramway, drawn by horses. It was seen quite early that extension to the suburbs was necessary. In many cases there were towns again just beyond the fringe of suburb. There were urban-clusters. Local authorities, therefore, frequently obtained powers to make inter-running agreements. The statistics show that in almost every case the municipal frontiers are not the frontiers limiting the tramways.

Manchester, for example, arranged through-running with Ashton-under-Lyne, Oldham, Rochdale, Stockport, and the Stalybridge Joint Board. Here the operating authority pays over to the owning authority the receipts taken in the owning authority's area, while it receives expenses for excess mileage. With Salford, the arrangement is different. Salford's cars come over Manchester rails at a rent of £200 per mile per annum for sole user of single track, and £100 for joint user of the Manchester and Stretford rails. Manchester pays Salford an annual rental of £100 per mile of single track for joint user of the Salford and Prestwich tramways. Each authority also pays the other for the current consumed on a mileage basis, and Salford pays Manchester local rates on tramways used solely by it.

Various authorities have leased their lines on a variety of bases, for example, interest and sinking fund on the capital outlay, to Manchester.

Sheffield, to take another example of inter-running powers, both extended its own area and also made arrangements with Rotherham, whereby each pays the other a sum for excess mileage run by each on the other's tracks. Rotherham itself undertakes transport within a radius of twelve miles. Liverpool's tramways served Bootle[1] in payment to the latter of rates, rents, and road repairs, as well as some additional mileage in other districts. Glasgow entirely acquired several small undertakings on its outskirts, and goes out in various directions, the longest being on a route of twenty-three miles. Wolverhampton served three neighbouring urban districts and one parish. It enters more than twenty different local authorities, going as far off as fifteen miles from the city, and while its own population is about 134,000 it serves an area of 360,000 people. Birmingham extended its tramways mainly by extending itself, and by buying out the interests of a private company owning trams in the suburbs.

---

[1] Bootle had two representatives on the Liverpool Tramways Committee.

Although the economies of a larger area are obvious, it has been difficult in the extreme to secure co-operation between local authorities. In this sphere more than in any other the parochial outlook has exercised a bad influence. The Tyneside area, for example, ought long ago to have been a single transport area, but the first Report on the Depressed Areas point out, one case among many, that Wallsend feared the admission of Newcastle's trams lest this be considered an argument for the total absorption of the city by Newcastle. It was only when a clause was put into the agreement that such admission would never be so used that the agreement could be concluded. The Report of the Royal Commission on the Tyneside Area, which recommended the creation of a region containing the thirteen authorities, said: "In view of the evidence given, and the need for further and better travelling facilities for the public, we decided that a prima facie case had been made out for the establishment of a Passenger Transport Board."[1]

Another example of municipal jealousy is that between Leeds and Bradford: there is actually a slight difference of gauge in order to keep each other's trams out. The "break" between the systems of Bournemouth, Poole, and Christchurch is most inconvenient, but it continues. There is continual bickering between Blackburn and Accrington about the terms of inter-running. In 1930 Derby had a most difficult task in securing the power to extend its transport system—in the form of trolley-buses in place of trams—outside its area. Complaints were lodged against the scheme that the rural character of the outlying area would be ruined by the poles and overhead equipment, and the value of house property would be depreciated. Again, when Wigan in 1934 wished to abandon trams and run motor-buses on its system, which extended to all the thickly populated urban districts around, these districts had different preferences: some wanted trams to continue, others preferred trolleys to buses, all wanted favourable financial terms for *themselves*. It took over eighteen months to hammer out an arrangement—not necessarily the best technically. It can be inferred that useful and necessary as are the inter-running agreements, they may become an obstacle to change, for this means that a new agreement must be reached. Thus, Newcastle-on-Tyne is anxious to abandon its trams, but a Gateshead transport undertaking has a right to run trams from Newcastle to Low Fell, Bentham and Heworth. These are typical: apart from the difficulty of overcoming simple petty conceit and jealousy, there is that of settling the kind of transport vehicle, terms, and the fares.

---

[1] Cmd. 5402, 1937, p. 72.

It is now recognized that an area is served best not by one form of transport exclusively, but by a combination of trams, trolleys, and motor-buses, to suit diverse peculiar needs of the district. Which shall be used, and in what proportion, depends on a careful balance of several considerations, financial, topographical, and psychological. There emerges the view here, in much the same sense as in the other undertakings, that each area is an eccentric economic entity. There is no doubt that on the whole the municipal transport managers and the chairman of the Transport Committees are giving continuous and close attention to the balance of advantages and disadvantages.

The chief difficulty about the trams is that they serve congested areas; that they are route-bound, and that the route is very costly; that they must unload in the middle of the road, and therefore add to the congestion of the following traffic. Where, as in Birmingham, it has been attempted to overcome the loss on the trams by bigger vehicles with high-powered motors for greater speed and frequency, failure had to be admitted, because the rest of the traffic frustrated that object.[1] The only consequence was a large increase in the consumption of current. Nor was the expectation that greater frequency would bring a saving on motor-men and conductors fulfilled. Yet the principal economy of tramways is service in the nucleated area where heavy traffic is inevitable. And there the roads suffer serious wear and tear, and the undertaking has the direct obligation of repairing the tracks themselves and the crown of the road for eighteen inches either side.[2]

---

[1] Cf. A. C. Baker, Address to Institute of Transport, *Journal*, March 1931.

[2] Tramway Act, 1870, Section 28. The Municipal Tramways and Transport Association, in a communication to the Royal Commission on Transport (Cmd. 4048) in 1932, offered a calculation showing that this imposed a cost of maintenance of £127 per year per tramcar. The Association observed also that the annual capital charges on the permanent way accounted for a further £169. Rates on their property

The problem of the peak load gives very great anxiety. For example, in Rotherham, 50 per cent of the vehicles remain in the depot all the week. It is a market town for a large rural area, and the peak comes for two hours on Saturday afternoon. The Burnley, Colne, and Nelson Joint Transport Committee has also only a 50-per-cent workability. In Birmingham 60 per cent of the rolling stock is idle between 6.30 a.m. and 5 p.m., and many vehicles costing (buses) £2,000 each do only four journeys a day. In Halifax local conditions allow of the use of 80 per cent of the fleet twice a day from Monday to Thursday, 90 per cent on Friday, and 100 per cent on Saturday.

It is becoming increasingly difficult to consider extending such expensive permanent way to the advancing boundaries of some towns, and, in particular, to the new housing estates. It has been found best to serve these by buses, for while the chief immediate costs are the vehicles and their running, the cost of the road is borne by the municipality as a whole, and is partly met out of grants by the central authority. Even here it is hardly possible to run such routes at a profit.

The trams still have a hold because of certain natural merits. They have a large seating capacity combined with safety because they run on lines. The running expenses (conductor and driver) are, per passenger, lower than those of the trolleys and buses. Hitherto, the latter have had to be smaller than trams either for stability (trolleys) or for weight, which is fixed by the Ministry of Transport for safety and kindness to the roads. But the trams are being abandoned where the cost of reconstructing the line is large in comparison with the density of traffic at less than one car in every six minutes. (So, up to 1931 in Wolverhampton, Chesterfield, Darlington, Ipswich, Keighley, and Worcester, where the average length of the route was seven miles and the number of cars twenty-five.) Since 1931 there have been more abandonments.[1] The Royal Commission on Transport was not kind to the trams:[2]

> "Our considered view is that tramways, if not an obsolete form of transport, are at all events in a state of obsolescence, and cause much unnecessary congestion and considerable unnecessary danger to the public. We recommend, therefore, (*a*) that no additional tramways should be constructed, and (*b*) that though no definite time limit can be

---

(not exclusively used by the tramways) amounted to another £51. They observed also that the responsibility of the track was imposed at a time when horses, running three abreast, drew the cars, ploughing up the road with their hoofs.

[1] Cf. Table, p. 54 supra.

[2] Final Report, Royal Commission on Transport, 1931, p. 163.

> laid down, they should gradually disappear and give place to other forms of transport. . . . We are unable to prescribe any definite period for the extinction of tramways, but we are of opinion that it will be to the advantage of the inhabitants of the towns where they exist to get rid of them by degrees, as some authorities have done already."

The motor-bus has the very great advantage over both tramways and trolley-buses of flexibility, as to route and as to adjustment to other traffic in the road. But local authorities have not been fortunate in their wishes to develop motor-bus undertakings. They were not allowed to substitute them for trams, but had to begin with the process of asking for a local Act. Only a few authorities obtained this permission. It was even more difficult to get power to run the buses beyond the municipal boundary. Moreover, the power of the authorities even within their own area was in some cases restricted to specific routes. Thus, it was not possible to link up the tram routes over new and uneconomic gaps caused by the city's development. But after the War there was a rapid rush of private enterprise, sometimes by one-bus owners or companies, into and beyond the area of the trams. These competed at the cost of small licence fees against the trams with the heavy statutory charges mentioned. In York, for example, there were in 1923 only thirty-seven buses, including those in the ownership of the Corporation; in 1930 there were 325 licensed to ply. The Corporation had made a profit on the trams and buses to 1928, and thereafter suffered annual deficits. Wealthy companies, for example, the West Riding Omnibus Company, established a great network of services including many municipalities.

Hence the local authorities were late-comers in a crowded industry. They were able, of course, to exact certain concessions from the proprietors, for they had the power of licensing the vehicles for safety through the Watch Committee. They could not finally veto the buses, but the owners would yield much to be spared the trouble of appealing to the Ministry of Transport. Attempts at remedying this discrimination against the local authorities by private members' Bills (e.g. Parliamentary Debates, March 1926, House of Commons) were unsuccessful. The conservative opponents of municipal enterprise were too obstinate.[1] Omnibus firms were paying wages to drivers and conductors which in some cases (e.g. Doncaster) were less than one-half and in other cases less than two-thirds of the hourly rate paid by municipal authorities on buses and trams and trolleys.[1]

---

[1] Cf. a sample extract from this discussion: "Take Liverpool, Birmingham, Bradford, and Leeds; if these municipalities had facilities for trading outside their own limits and linked up with one another, the result would be that they would inevitably run private omnibuses off the roads, with all private enterprise, and those people who have invested their money in this kind of trade would lose it.

The matter was dealt with, at a disastrously late date for the municipalities, by the Road Traffic Act of 1930. This Act divides local authorities into two categories. If they are not now operating trams, light railways, trolley vehicles, or bus services under a local Act or Order, they can only obtain power to run buses by private Bill. If they have the power, *and are exercising it*, they may run public service vehicles on *any* road within their own district; and, with the consent of the Area Traffic Commissioners, outside their own district. There is an elaborate procedure for obtaining consent for running within or without the area, designed to see that interests are notified and given the chance to lodge objection. If objection is lodged, a public enquiry must be held by the Commissioners. The power to give or withhold consent is in the discretion of the Commissioners who must have regard to the extent to which the requirements of the area of the applicant will be served either directly or indirectly by the service on the route proposed. Thus operating local authorities with

APPLICATIONS FOR CONSENT FOR EXTRA-BOUNDARY POWERS UNDER PART V OF THE ROAD TRAFFIC ACT, 1930

	1931–34	1934–35	1935–36	1936–37	1937–38
Number of applications ..	226	49	20	35	28
Consent granted	139	39	16	27	20
Consent refused	40	—	3	2	2
Application withdrawn ..	35	2	—	3	2
Appeals of Ministry of Transport:					
Decision of Commissioners reversed	3	2	—	—	—
Decision of Commissioners allowed	9	—	1	—	—

SOURCES: 1931–34: D. N. Chester, *Public Control of Road Passenger Transport*, p. 21.
1934–38: Reports of Traffic Commissioners.

They cannot compete against a rate-aided competition of that kind. Is that fair and just? Private enterprise has done admirable work, and it is the pioneer in this service, and I think it would be grossly improper if we passed a Bill which gave these facilities and powers to the local authorities" (Col. 2807).

[1] Cf. "Municipal Passenger Transport," in *Municipal Review*, p. 163, 1930.

hitherto restricted routes have now general powers; while authority to go beyond the boundary is obtainable without going to Parliament.

The municipal bus undertakings are likely, therefore, to be only those in substitution for abandoned trams, or to supplement their network; and there may be some extension, but it cannot be much, by the buying out of private undertakings and the making of inter-running agreements and joint managements. The extent to which individual local authorities are bound to short-distance bus traffic is discernible from the following table, in which it is particularly instructive to observe the proportion of "stage" passengers to the rest of local authorities' traffic.

LOCAL AUTHORITIES' SHARE OF PASSENGERS CARRIED ON PUBLIC SERVICE VEHICLES*

YEAR ENDED DECEMBER 31, 1933

Percentage of all operators	Percentage of vehicles	Percentage of passengers carried				
		Stage	Express	Excursions and tours	Contract	All services
1·6	12·8	23·6	0·6	0·8	10·1	23·4

* Adapted from Chester, op. cit., p. 51.

The electric trolley-bus is not suitable to all places. Mr. Spencer weighs up some of the considerations relevant to the choice.[1] Since trams are obliged to provide workmen's fares, in industrial areas an especially heavy concession, very large vehicles are needed to cope profitably with the peak load. They carry 5,500 passengers per hour between seven and eight in the morning, and the remainder of the day, until 4 p.m., only four or five hundred. One tram is preferable to two trolley-buses each with fifty passengers and *two* drivers and conductors. Hence, the trolley-bus should only be used where the difference between the peak load and the rest of the day's load is not so great as this. Even in the experiment described by Mr. Spencer, 25 per cent more car-miles had to be run with trolleys than with trams, even with a trolley which held seventy-four seats and five standing. Further, as between the trolley- and the motor-buses, the route of the former was liable to the payment of rates, the latter's not. There was also the consideration (widely supported by quite independent experience[1]) that people like nice new attractive vehicles and take more rides in them. In the course of the discussion referred to, it was observed that with the increase of traffic the disadvantage of unloading in the middle of the road has been aggravated. The merits of the trolley-bus were extolled: odourlessness, flexibility, sweet riding, easy control, rapid and powerful acceleration, noiselessness the small number of working parts, the low costs of maintenance, and the fact that they keep local electricity supply stations busy with a good load. Certainly, the trolley has the advantage over the motor-bus which stinks, is horribly noisy, and given to leaping, jerking, and jolting—and consumes petrol which must be imported.[2] It has also been observed that the life of a trolley is from eight to ten years, and therefore it is in a better position to meet advances in technology than trams with a paid-for life of twenty years.

---

[1] C. J. Spencer, *Institute of Transport Journal*, May 1933.

Much therefore depends on the design of trolley-buses to meet individual situations to give the appropriate combination. Considerable experimentation has occurred and its success is to be seen in the speed of extension.

Portsmouth, which obtained Parliamentary powers in 1930 to scrap its trams and substitute trolleys, put fifteen different vehicles on the first route in order to discover which promised the best results. The Portsmouth Transport Manager reported:

> "The four-wheel fifty-seater type was finally selected as being (*a*) more suitable for and more readily negotiated than the six-wheeled larger vehicle about the narrow roads with sharp bends common about the system; and (*b*) the fact that at times of peak loading with the larger vehicle, it was found impossible for one conductor to efficiently discharge his duties, check and collect his fares, etc., within a stage length; and (*c*) that the large earning capacity of the sixty-seater vehicle (valuable perhaps only at times of peak loading) did not justify the higher running cost during the much longer periods of light loading."[3]

The Road Traffic Commissioners have no control over electric trolley-buses, and this probably accounts for their more rapid development than motor-buses.

The average comparative serviceability and spread of the three municipal transport services is (when allowance has been made for the higher fares of trolley vehicles and motor-buses) nicely expressed by the figures marshalled by Mr. Hopkins:[1]

---

[1] *Why we Scrapped our Trams, Bus, and Coach*, February 1929.

[2] A body called the Coal Utilization Council is active in bringing to the attention of municipalities the merits of the trolley-bus which indirectly consumes coal.

[3] Ben Hall, *Trolley Vehicles*, Paper before the Municipal Tramways and Transport Association, June 1937.

AVERAGE PERCENTAGE OF TOTAL ANNUAL ISSUE OF TICKETS

Fare	Tramcars	Trolley-buses	Motor-buses
d.	Per cent	Per cent	Per cent
½	20·227	Nil	1·518
1	47·084	36·923	31·073
1½	25·15	25·185	23·597
2	15·042	14·928	19·139
2½	2·877	3·988	5·771
3	3·537	2·827	6·013
3½	0·328	0·531	1·297
4	0·889	0·363	2·436
4½	0·282	0·174	0·666
5	0·417	0·26	1·284
5½	0·01	0·005	0·573
6	0·421	0·109	0·906
Number of undertakings included in average ..	41	19	75

TRANSPORT AUTHORITIES

The Joint Boards which have come into existence outside London are, in order of date, the Stalybridge, Hyde, Mossley, and Dukinfield Tramways and Electricity Board (1901); Huddersfield Joint Committee, 1928; the Burnley, Colne, and Nelson Joint Committee; the Liverpool, the Halifax, the Sheffield, the Todmorden, the Keighley, and the West Yorkshire arrangements were made subsequent to the Road Traffic Act of 1930.

A short account of them reveals their possibilities and difficulties.

The Stalybridge, etc., Board was constituted by Act of Parliament to construct and run tramways and to generate and supply electricity. Each of the four corporations sends six representatives to the Board of Management. The security of the combined rates is behind the power to borrow for the Board's purposes. The revenue from the tramways is applied to maintain the tramways, to paying all the working expenses, to the payment of interest and the provision of sinking fund, to the provision of a reserve fund. Then, if there is any surplus, including the interest on the reserve fund when the fund amounts to £20,000, it is divided among the four corporations in equal shares, going to their borough funds. If there is a deficiency the Board is authorized to apportion this equally between the corporations and to issue precepts for the amounts. Finally, the Board has power to offset losses on tramways by profits on electricity, and vice versa.

---

[1] Cf. *Proceedings Municipal Tramways and Transport Association*, 35th Annual Conference, p. 124.

Burnley, Colne, and Nelson are almost indistinguishable topographically and economically. The first had tramway powers, and in 1925 acquired bus powers; but owing to the opposition of neighbouring bus undertakings these were limited to the borough boundaries. But in 1930, under the Road Traffic Act, the Commissioners gave their consent to running in the districts of adjacent authorities. Since 1903 Colne had been developing a light railway system, serving two outlying villages through a private company. In 1911 a through service was commenced with the Nelson Corporation. In 1914 Colne bought out the undertaking, and then commenced a jointly operated bus service with Nelson. Nelson's light railway was extended from the borough to a neighbouring urban district. By the late 1920's the systems were heavily depreciated, some tramways no longer sufficed, being single track, new money was needed, but the area was impoverished by the depression. After careful consideration and expert advice by Mr. Arthur Collins and Mr. A. R. Fearnley, General Manager of the Sheffield Corporation Transport Department, it was concluded that the abolition of existing boundary terminals, the standardization of fare stages, and reductions of fares for special types of journey would result in more traffic. In April 1933, therefore, the three systems were co-ordinated in a Joint Committee. "Local pride" had obstructed this development for years. The authority differs from the Stalybridge arrangement in being a joint committee and not a board, that is, it is a more tentative power, and this was chosen so that the results of a period of experiment might be observed before full commitment was made. A Committee of eight members manages the combined undertakings, representing the three authorities. The Chairman is annually elected in rotation among the authorities. A deadlock can be met by the calling in of an arbitrator at the instance of one or more parties. The Committee took over the capital assets of each authority, but each authority retained its outstanding loan debt. Further capital will be raised in agreed proportions, the Committee itself having no power to raise a loan. Surplus revenue is divided and deficits also, on an agreed basis, as nineteen is to five, is to eight, for Burnley, Colne, and Nelson respectively. There are full stipulations governing the application of revenues on the basis of the best experience of transport undertakings. The results have been beneficial. Between 1933 and 1938 there had been a change-over to motor-buses, with co-ordination of routes with the Ribble Motor Services, Ltd. Passenger miles had increased from something over 36 to something over 43 million; income from £244,540 to £280,418 per annum. Percentage working expenses to receipts had decreased from about 84 to less than 77. The route had been lengthened by nearly one-seventh. The Joint Committee was renewed in 1938 for a period of seven years.

In 1931 Liverpool[1] made an arrangement with the L.M.S. and the L.N.E.R. for the conduct of bus services in the Merseyside area. The railway companies had acquired control of the Ribble and Anville Motor Bus Companies, which in previous years had offered severe competition to the trams and buses of Liverpool Corporation, partly checked by the Corporation's power to license. The agreement divides the area into four Zones, one comprising Liverpool, Bootle, and Speke, in which the Corporation have the monopoly of service altogether internal to the Zone, but the companies may run into it from outside. Another Zone allows joint services with company management and division of receipts and expenses between them and the Corporation. A more distant Zone is reserved to the companies' road services, with the exception of Corporation tramway services. The fourth Zone allows for both parties at their discretion. Further, there are more detailed special arrangements regarding certain routes of chief interest to the Corporation, and in these cases the companies pick up the passengers, the revenues go to the Corporation, which pays the expenses on such traffic to the companies. However, this agreement did not altogether overcome the earlier want of co-ordination, since a dispute between Liverpool and Bootle, which became acute in 1929, was not settled until 1933. In 1939 a bus company promised Bootle services more satisfactory than Liverpool's tramways. Liverpool offered the same bus service as the company. Bootle accepted both. After a year in which both ran buses, the company was bought by the Ribble Company, and in the 1931 agreement the buses were withdrawn by the latter. The Liverpool Corporation began a service, but lost heavily, and with the Traffic Commissioners' permission withdrew the service. A licence was then given by the Commissioners to a new company supported by the Bootle Corporation. Liverpool had protested against this grant of power, wishing to protect its tramways, but preferring the

---

[1] Cf. *Survey of Merseyside*, vol. ii, pp. 158 et seq.

Ribble Company if buses were to be allowed to run. The Ministry of Transport and the House of Lords decided on the withdrawal of the powers to the smaller company and the award to the Ribble Company. The Liverpool tramways were given protection. Bootle applied for a local Act to operate its own bus services within and without the borough. It was given these powers. It may abandon its trams before 1942 only with consent of Liverpool Corporation. Thereafter it may do so at its own discretion.

Halifax is at the extreme western edge of the West Riding. It had come to extend its tramway system to fifteen local authorities outside its boundaries. Then, as the town is on the main roads between Lancashire and Yorkshire, a number of long-distance bus and coach services came into existence. Before 1930 these were licensed by the Watch Committee of Halifax, which stipulated fares protecting the tramways over the routes in which they came into competition. The neighbours of Halifax, who had in the past enthusiastically urged the town to extend its facilities, made no bones about giving licences to a number of bus companies which ran into Halifax, on return tickets if desired. Halifax took the bull by the horns: it bought out the bus services, and then made an agreement with the L.M.S. and L.N.E. Railways regarding the owning and operating of buses outside the area of the borough. The long-distance operators were, under the Road Traffic Act arrangements, made to enter into an agreement with the Corporation and the Joint Committee of the Corporation and the railways to pay a percentage on the fares from passengers picked up and set down within the area, in return for a co-ordinated scheme of fares and time-tables. The result has been gratifying for the authorities and the passengers. Unremunerative mileage has been reduced to the minimum during off-peak times and the revenue per mile has shown a remarkable increase: in 1929–30 the revenue per mile was 10·07d., in 1934–35 13·89d., and 1935–36 13·09d.; while the operating expenses per mile were 10·53d. and 8·12d. and 8·158d. respectively. Between 1929–30 and 1934–36, the total revenue rose from £63,056 and £130,404, and the passengers from 3,500,000 to 11,679,000.

The Corporation has its own full control of transport *within* the borough. The Joint Undertaking concerns services running into and outside the borough. Its management and staffing is identical with the Halifax Transport Department. It has worked smoothly and beneficially to consumers.

Huddersfield have operated trams since 1882, and buses since

1913. In 1928 the railway companies attempted to get powers to run buses within the borough, since the Huddersfield buses were restricted to one route. They were opposed and defeated; and without the consent of Huddersfield the companies could not run buses. Negotiations resulted in an agreement between the Corporation and the L.M.S. whereby, for a fixed sum, the L.M.S. was allowed to share equally in the whole of the bus services within the borough. But the Corporation has reserved the right to substitute trolley-buses for trams on all existing tram routes. The agreement is terminable in 1938 or thereafter by either party. The gist of the agreement is that the bus services are managed by a Joint Committee of eight persons, each side having equal representation, the chairmanship alternating between the two parties. Questions are settled by agreement, not by a majority vote. Gross profits are divided equally. Each side bears its own capital charges. On competing routes tramways enjoy a protected fare. But this has been undercut by private companies which issue cheap return fares. There is some uneasiness among citizens as the agreement has reduced the control of the Corporation over transport arrangements within the borough itself.

Sheffield has had a partnership with the L.M.S. and L.N.E.R, for the operation of buses since 1929. Since 1913 Sheffield had been developing quite an extensive system of bus routes. The arrangement made was that all bus routes within the city should be managed exclusively by the Corporation. Other routes going through, but not very far outside, came under the joint management of the Corporation and the railway companies. A third category, of long-distance services, were bought altogether by the companies. Here again a Joint Committee operates much as in the Huddersfield scheme, and the Sheffield Transport Manager is its secretary and executive officer. Neither party can commence new services in the second category of routes. Within the city the Corporation is free to do as it likes. In the long-distance services the companies may operate through the city, provided they do not take up or set down passengers within the city and the outskirts. The Joint Committee has taken over most of the small operators in the neighbourhood, and made inter-running agreements with the surrounding municipalities and large companies in the vicinity. The financial arrangements are much the same as in the Halifax scheme. The arrangement has worked well and without friction, and there is general public satisfaction.

Todmorden began bus services in 1907 (the second municipality to do so), and in 1923 obtained powers to extend them beyond the borough boundary. In 1931 an agreement was made with the L.M.S. similar to those already outlined. Receipts are equally divided, and the Corporation receives a rent for garage and plant previously used by it. There were no tramways in the area to complicate the arrangement. The system was worked smoothly and advantageously. There is no feeling that democratic control is wanting.

Keighley's transport history goes back to 1888. By 1904 the trams were run by the Corporation, and in 1905 independent buses appeared. The Corporation obtained bus powers in 1908, but changed to trolleys in 1914. The trolleys were not successful, and in 1922 were replaced by buses. Private bus services outside the borough were being actively developed. In 1924 the remaining trams were abandoned in favour of trolleys. By 1928 the many bus companies were amalgamated in the West Yorkshire Company. The Corporation trolleys were losing money through competition and unexpectedly rapid obsolescence of the vehicles. There was considerable duplication of services. An agreement was arrived at with the Company after long negotiations. The trolleys were abandoned, and the facilities under Section 105 of the Road Traffic Act of 1930 made use of. A new company was established to which the Company and the Corporation assigned equal amounts of assets. Each was to receive an equal share of the profits. The West Yorkshire manage the new undertaking as part of their own system, with consequent co-ordination and administrative economies. On a directorate of seven, the Town Council has three representatives. For the task of management the West Yorkshire receives a fee. The West Yorkshire pays to the Corporation a percentage of the revenues it receives for through services which it is allowed to operate. The financial results to the Corporation have been very satisfactory. There is some dissatisfaction that the town cannot be in complete control of its own transport.

Another form of arrangement is that made by York with the West Yorkshire Road Car Company, Ltd. Here again the history was one of unsuccessful operation of a tramway system in face of competing omnibus services. York itself had established housing estates in the suburbs which were served not by the trams, which did not reach them, but by private bus services. There was a loss of, in 1929–30, £3,770; 1930–31, £4,248; 1932, £14,088; 1933, £18,239. An arrangement was reached with the Company which had absorbed the small services, commencing from April 1, 1934, and valid for a minimum term of twenty-one years. The York–West Yorkshire Joint Committee is composed of six members, the Corporation and the Company having equal representation. The Company assumes responsibility for management and operation of the Corporation's services now and as they develop; buses are jointly operated within a defined area, and profits and losses are shared. Tramways have been abandoned. The services of both undertakings have been co-ordinated and rearranged in the city and its dormitory townships and villages. Financial results have been satisfactory. There is some dissatisfaction that the town cannot be in complete control of its transport.

It cannot, in view of interrunning arrangements and joint management, be asserted that the local authorities are unaware of their responsibilities for economical services, or are uninventive or unhelpful in the seeking and making of joint agreements. Those which have made them have secured inter-available tickets, co-ordinated time-tables, and a saving in capital and running costs per unit of service actually utilized by the passengers. But there are many other places where similar if not identical arrangements could be made. The Tyneside area is one. The Lancashire–Cheshire area also calls strongly for this. We have already referred to the efforts made to secure a Joint Board in that area. It is a grave disappointment to find that after over five years of negotiation authorities have stood out for one reason or another and defeated the purpose. Some have shown fear for their local control and power. Others on the outskirts of the area have feared that they would not gain enough.

The municipal transport areas are in a state of rapid flux. The urban centres are still the chief and primary element in the situation, but the law has long permitted joint arrangements with those neighbours which together form a "natural" traffic area. These arrangements are being powerfully affected by the advent of new and more flexible forms, the trolley- and the motor-bus. Owing especially to the last mentioned, municipalities are becoming an integral part of new transport areas, but only to a small extent through their own bus undertakings. By direct negotiations, and by representations to the Traffic Commissioners, they achieve linking-up schedules with large areas. No doubt a neater and swifter job could be done by officials armed with the coercive power of the central government to draw up new transport boundaries—they would settle the most economical area, if the area could be regarded as one of homogeneous interests, would settle the financial terms thereof, and establish the various forms of transport to be utilized. They would, incidentally, weaken a sense of interest in and responsibility for the day-by-day management of the undertaking. Yet at this stage of social evolution it is highly probable that the local authorities who would form the constituents of any joint boards which might be instituted, would through their representation, which is a fundamental factor in such schemes, adequately convey popular feeling regarding the quality of the Joint Boards' services and plans of development.

BOOK THREE

FACTORS IN SELLING

Chapter 16. Pricing
" 17. Gas Charges
" 18. Electricity Charges
" 19. Transport Charges
" 20. Water Rates and Charges
" 21. Stimulation of Sales and Service

Chapter Sixteen

PRICING

In coping with demand, local authorities, like any other form of enterprise must concern themselves with four main functions. First, they must explore demand. In particular they must estimate its elasticity and the possibility of its stimulation by salesmanship and advertisement. Almost inseparable from this, they must, secondly, render the services necessary to satisfy the consumers and induce them to buy more of their commodity. Thirdly, they are obliged to experiment with demand in order to discover the more exact relationship between service, charge, and elasticity of demand. Finally, they must discover the method of charging and the actual prices which will cause sales to be as planned.

The most general principle of pricing by local authorities is that they are not bent upon making a profit in the ordinary commercial sense of the word. As we have shown, many local authorities have either at their own will, or under compulsion from Parliament, now adopted the policy of utilizing any surplus to improve the undertaking. Quite consciously they are adopting the policy of serving as many consumers as possible, at prices as near to the cost of production as can possibly be estimated; while organizing prices and production to get that cost of production progressively diminished. As the phrase on the tariff of gas charges of the Borough of Colwyn Bay says, "The constant aim of the gas department is to offer its consumers the best and most complete service of gas at the lowest possible cost." Or, as the Electricity Manager of Birmingham has said, "Keeping firmly in mind the broad view of our duty to the public, a large surplus on the year's trading represents not success but failure. Tariffs should therefore be reduced from time to time so as to increase sales whilst maintaining a small credit balance on the net revenue account."[1] This sales policy was long ago emphasized in the majestic rhythm of Cockburn, L.C.J., in *Birmingham* v. *West Bromwich Improvement Commissioners* (2 B.O., 1879), "A corporation or a public body, distinguished from a private company, have not to make a profit; they have to supply, both as regards quality and quantity, the articles to the consumer upon the cheapest terms upon which they can supply it."

---

[1] Presidential Address Convention, Institute of Municipal Electricity Authorities, June 1937.

Before the considerations which enter into the establishment of a tariff are described, two matters must be made clear. It is arguable that such considerations would be known to and taken into account by public utility economists, but not local managers and committees of the undertakings. Those who argue in this way forget that the assistance of experts and of treatises is heavily drawn upon. Secondly, as we have observed before, the analysis does not and cannot produce perfectly accurate indications. There is much hit-and-miss and trial and error.

It is possible to discern the following tendencies in municipal price policies. First, all demands for the commodity are to be attracted in order to increase the use and finally the capacity of the plant so that the technical benefits of "indivisible equipment," i.e. "economies of scale" from large plants, may be obtained. Secondly, those demands will be preferred which it is estimated cost the local authority the least. Therefore, special expenses connected with particular consumers will be charged to those consumers, and a preference will be given to those whose demand has the best effect upon the load factor. The various possibilities of the effect of diverse groups of consumers are considered in advance, and a policy prepared. Thirdly, there is evident a charitable principle where special allowances are made not so much for small as for poor consumers, although in actual practice municipal undertakings as well as private undertakings find it extremely difficult administratively to make the distinction. There is, of course, considerable controversy whether this philanthropic element should be wrapped up in the ordinary tariff or whether it should be severed from it. This controversy may be well indicated by counsel's argument in the South Metropolitan Company's case before the Joint Select Committee in 1937. Mr. Tyldesley Jones said:[1]

> "Each of these witnesses told you that the increase on the price of the gas was a hardship. That was the story in each case, and having regard to the limited income in the cases with which they dealt, one could quite appreciate that any increase in the cost of anything, though it was bread, or boots, or gas, or water, or whatever it might be, would be a hardship. But, sir, that hardship has never induced Parliament to say that the price of bread shall be unremunerative as regards a particular class of consumer or that the loss on supplying that class of

---

[1] Report of the Joint Select Committee of the House of Lords and the House of Commons on Gas Prices, 1937, H.L. 24, 91; H.C. 110, pp. 250–51.

> consumer shall be made good by imposing an increased charge on the remainder of the community. . . . The right remedy surely is to adopt another course, and the other course is that which has been adopted by Parliament in the case of everything except gas. Gas is the only thing where the poorest member of the community is apparently to get his gas at the expense of the other users of the commodity. Water, of course, is charged in that way, because it is a vital necessity of life, and it is justifiable. I have an interest in my neighbour using water. If he does not have water available for use, I ultimately suffer and there are unpleasant consequences which get disseminated through the community from which we all suffer, and therefore water is supplied to-day for domestic purposes not as an article of sale at all, but as a public necessity for which the community has to pay according to their ability and their ability is measured by the rental or rateable value of the house they occupy. . . . When you get a section of the community who by reason of poverty are unable to provide themselves with the necessities of life, Parliament has taken a different line than that of requiring the usual suppliers of those commodities to supply them at an uneconomic price. The usual line, of course, has been to provide Public Assistance, and I believe it is a fact that an allowance will be made for coal under the Public Assistance. I do not know whether if a gas fire is substituted for coal or not an allowance will be made. I suppose that may depend to some extent on the authority administering Public Assistance. . . ."

Their peculiar position as representatives of the whole of their local community makes it quite impossible for councillors to ignore the philanthropic element and to regulate their tariff only by regard to the cost of production of the commodity for each consumer, even if that could be determined, which cost accountants and technologists deny. Frequently, councils cannot resist, and on grounds of social policy they ought not to resist, with the same rigour as the private undertaking the claims of the poorer section of the community. The Balfour Committee on Factors in Industrial and Commercial Efficiency reported that, "Many municipalities take a wide view of their responsibilities, and have embarked on activities of a trading or semi-trading character with a social aim—the supply to the citizens of services which they need, rather than with the ordinary commercial aim of showing a profit."[1]

For example, people tend to regard transport as not merely a business, with something to sell and a cost of production to cover. There are, as we shall show, constant claims being made (and granted) for special fares from charitable institutions, claims for special fares for children to and from playing fields and the local baths; by societies for the blind, and for nurses belonging to the

[1] Part II (1928), p. 304.

district nursing association. Yet the merely charitable expectations that arise out of long familiarity with a local utility are not the sole explanation of specially cheap fares. We must take account of the special characteristics of transport: the vehicle is proceeding along a certain route in any case, usually not completely full, and the prime cost of a single additional passenger is negligible. Why not, therefore, make the terms easy for the groups mentioned?

Fourthly, there is very evident in pricing for public utilities what we might call a "jealousy allowance." One must sometimes be unjust to the commandment of the cost of production in order that the small consumers who are the largest number may not grouse. This policy can be continued only as long as the prime cost of those consumers who are thus subsidized is not departed from to such an extent as to make it worth while for those consumers who have to make up this subsidy to pack up and remove from the area. This depends on prices in other areas, but also upon the relationship between the general excellence of municipal services and the municipal rates.

Fifthly, there is evident, where public utilities come under direct municipal management, the growth of a feeling in favour of minimum and non-differentiated costs, regardless of cost of production and distribution to the particular locality and individual. It is a growth of a feeling of "right."

> "I suggest that it is wrong to assume, as appears to be assumed in the paper, that transport should always be charged on a mileage basis. I know it is a revolutionary proposal to some people to suggest anything different, yet we might find grounds for the argument that people living a distance from the centre of any city are at present treated unfairly in comparison with other citizens when they are charged on a mileage basis. Therefore I think one of the lines to be developed and one of the avenues to be explored are whether we should get nearer to what I call, for want of a better term, the universal fare. It may sound extravagant when applied to transport, yet it is applied in nearly every other municipal service. You do not charge a man more for his education if he has a big family than you do if he has no family at all. It would be just as logical to argue that a man with no family should be exempt from paying education rate as it is to argue that you should charge people on a mileage basis for transport. You could apply the same argument to gas and electricity. It costs more to supply gas to people living on the outskirts of a city when they are a long way from the gas works than it does to supply people living in the next street to the gas works, yet it is never proposed to charge a different price per 1,000 cubic feet. You might argue also that a man living in the centre of a city—it is going to the opposite extreme—should be charged a higher

> proportion of rates for sewage disposal than the man living on the site of the sewage disposal works which are universally outside the centre of the city."[1]

As will be seen in Chapter Eighteen, the proposal has been made for uniform charges for electricity over the entire country—a policy known as "postalization."[2] Such a policy ignores the economic damage which would arise. It would in fact involve a subsidy to areas whose economic character or location caused them to be so sparsely inhabited that the cost of production of the utilities must be high. If it is assumed that as a rule people congregate only where it is economically worth while to do so, it would be senseless to make them pay for services to those who are economically unwise or flee the crowd for pleasure.

Finally, in the case of water another element of charge enters in: there is such a large measure of sanitary interest that people must be *forced* to have water, and since compulsion will not operate if it is accompanied with high prices (as in the case of elementary education when it was made compulsory in 1870), the price of water cannot be tethered closely to what it costs.

Three other points ought to be borne in mind about municipal price policies. First, local undertakings do not operate in a void, but side by side with very vigorous private enterprise. This alone would keep them up to a standard of keenness and efficiency because the figures of cost would act as the foundation of a competitive element. Local authorities could not explain away all the discrepancies if their prices were higher; and their technicians and manager would feel humiliated if they could not show results at least as good. But that is not all. Both municipal and private technicians have had roughly the same training, and a considerable proportion have served in both municipal and private undertakings. Moreover, the advent of fierce competition between electricity and gas has resulted in municipal and private firms forming a common offensive and defensive association in each of the industries. They elaborate their price policies in common; and though there is a point at which they have to part, their technological and accountancy foundations are practically identical. And municipal authorities have in both gas and electricity given the lead to the whole industry in devising promotional tariffs.

---

[1] One interesting suggestion made in the course of discussion before the Association of Municipal Tramways and Transport in 1935–36 was the charge of a 1d. fare universally on every transport system in a manner similar to the postal arrangement. Cf. Alderman A. J. Dobbs (Vice-Chairman Leeds Corporation Tramways and Transport Committee), *Proceedings of the Municipal Tramways and Transport Association (Inc.)*, 31st Annual Conference, 1931–32, Discussion on Mr. Baker's paper, "The Effect of the Development of Housing Estates on Municipal Passenger Transport," p. 89.

[2] It has been shown that Sir Rowland Hill never advocated a system of uniform charges in his policy of "the penny post." Cf. Coase, *Economica*, November, 1939, p. 423.

The second point is that local authorities, as well as private undertakings, are obliged to modify the subtle precision of tariffs because the minds of their consumers are not subtle. The consumers cannot understand an elaborate set of distinctions and do not want to. The moment a tariff goes beyond what one may understand by simple perception is the moment when suspicion begins to grow. Therefore, both technical necessity and the justice of a charge must, to some extent, succumb before the demand for simplicity. Not too great a task of tuition must be put upon the salesman. We are simply stating what municipal practice demonstrates.

Thirdly, the tariff has to be easily administrable. Here English local authorities merely follow the canon of taxation of Adam Smith, that the cost of collection should not be an excessive proportion of the tax collected. For example, in 1933 the Stepney Borough Electricity Department was obliged, when the costs of reading meters went up, to change from monthly to quarterly accounts. It would, again, be fascinating and just to work out the fares on the trams and buses by the number of inches travelled, but the system would not be easy to administer by the conductors we know. The practice of German municipalities of over-elaborating their stages demonstrates that, as does all German municipal price fixing.[1] For easy and cheap administration one needs not justice but only rough justice. That is what existing tariff systems attempt to secure.

An extension of this theme has been made by Mr. J. D. Imrie, City Chamberlain of Edinburgh. In an article in *Public Administration*,[2] he asks the question, "Is there a possibility of still continuing the development of the great public utility services on efficient lines while at the same time recognizing the social end of these services by stimulating consumption by more simple methods than are at present either in force or in favour?" He pays special attention to gas and electricity which he regards as "efficiently run within the limits of the legal framework," as being in a position to give abundant supplies, and as producing on a decreasing cost basis. He looks to a saving on the measurement of consumption, that is meter reading,[1] and on costs of distribution, which include salesmanship and the rest. To achieve these economies, and the saving of time and trouble in struggling with the complex problems of tariffs, he proposes that there should be fixed a standard annual charge of a consumer, which would rise and fall each year with the actual consumption. There could be one reading of meters a year, and on this basis, and "according to the circumstances of each consumer at the time of the review." There is, of course, at the basis of this suggestion, a recognition of the "social end" of these services. In the case of the poorer consumers this end would transcend considerations of cost, as is the case in water-supply, and often in transport, and sometimes as we have already suggested in gas pricing. A day may, indeed, arrive, in a not very far distant future, when these services are regarded as "urgent" or "basic" in the sense in which the health services are already.

---

[1] Cf. Batson, *Price Fixing Policy of German Public Utilities.*

[2] October 1935, pp. 334 ff., "The 'End' of Local Government in Relation to its Cost."

It is clear from the foregoing remarks that the types of governmental control over prices applied to the statutory companies are unnecessary in the practice of municipal enterprise. The latter like the former are monopolies, but their constitution, which, in the main is the body of consumers organized to supply themselves, excludes the wide, determined persistence in exploiting for profits usually to be expected of private monopolies. As was said in evidence before the Royal Commission on Transport,[2] "Of course, as far as a municipality is concerned I cannot imagine how a monopoly could be to the disadvantage of the public. After all, I cannot believe that a democracy will permit itself to be oppressed by its own action. If we were to attempt to abuse those privileges our masters are very close at our elbows."

In the case of gas supply, the companies are subject to general statutory controls, enforceable by the appeal of a number of consumers to the Board of Trade. In the course of the 19th century gas charges were successively regulated by the imposition of (*a*) a maximum price and maximum dividend, (*b*) a stipulated sliding scale whereby dividends were allowed to increase as prices decreased. In 1920 there was established for the South Metropolitan Company the "basic price" system, in which the average price of gas for all consumers governed the dividend. The intention was, among other things, to allow the Company to give reductions in price to large consumers, and also to safeguard the small consumers from heavy charges. These systems were supplemented by the right of local authorities to raise official objection "to vary the terms" of the order regarding company charges. Though the history of electricity charges is different from that of gas, here also the local authorities have rights of objection. Moreover, the price regulation mentioned, however carefully devised and amended to meet difficulties in operation, has again and again been subject to the criticism that it does not indubitably prevent monopoly exploitation or encourage managerial and technical improvement. Hence there is exceedingly great watchfulness by Parliament, by the Board of Trade, and the Electricity Commissioners, and the power of objection by consumers and local authorities.

---

[1] Cf. p. 306 infra for estimates of costs of meter reading.

[2] Minutes of Evidence, February 1, 1929, p. 263.

Such a type of regulation is clearly unnecessary in the case of municipal enterprise. The incentives, the producer's outlook, the sense of responsibility are separated by an extraordinary gulf from those in private enterprise, and we have given some account of this difference, together with the implications in terms of administrative arrangements in Chapters Ten and Eleven.

THE COST OF METER READING

Since local authorities have recently been too busy to extract figures of the cost of meters, the accounts organization, and sales, I offer the following very tentative indication of such costs, wide open to correction. In Burnley, 1937–38, we find the following for gas supply:

	£
Meter inspection	1,862
Meter repairs, etc.	5,905
Wages—showroom	488
Wages—clerks, say (½)	1,743
Stationery, post advertisement, say (½) ..	719
General establishment charges (½)	575
3 % on £103,000 capital spent on meters ..	3,090
1/10th this sum, as loan amortized in 10 years	10,300
	£24,682

As Annual Revenue Income is £157,000, the cost of *selling by meter* is about 15 per cent of the price paid by consumers.

In Barking, 1937–38, we find the following for electricity supply:

	£
Meter reading	1,179
Meter repairs, etc.	2,213
Clerical and a/c staff (½)	2,133
Stationery and printing (½)	220
General establishment charges (½)	728
Showrooms	1,266
3 % on £46,000 outlay on meters	1,380
1/15th £46,000, as loan amortized in 15 years	3,060
	£12,179

In this case the Annual Revenue Income is £111,456, and the cost of *selling by meter* is about 10 per cent. of the price paid by consumers.

Chapter Seventeen

GAS CHARGES

THE law relating to charges for gas supply is laid down in the Gas Works Clauses Acts of 1847 and 1871. The principal provisions are these (Section 13 of Act of 1847): "The undertakers may from time to time enter into any contract with any person for lighting or supplying with gas any public or private building, or for providing any persons with pipes, burners, meters, and lamps, and for the repair thereof, in such manner and upon such terms as shall be agreed upon." Thus no power is possessed by the local authority to impose a given form of charge. But by Section 11 of the Act of 1871 the gas undertaking is *obliged* to supply gas if required to do so by the owner or occupier of any premises situated within twenty-five yards or other prescribed distance from any main. The authority may charge the owner or occupier the cost of pipes entering the property and of so much of any pipe as may be laid for a greater distance than thirty feet from any pipe of the undertaking, although not on the owner's property. Moreover, consumers may be required by written contract to take and pay for a supply of gas for at least two years of such an amount that the rent payable shall be not less than 20 per cent per year on the undertaker's outlay in the provision of the necessary pipes. These provisions for payment were enforced generally until recent years, but since the advent of very strong competition and in the public interest, many local authorities waive the price or reduce it to a minimum in order to secure business.

Where local authorities obtain their powers by private Bill the common clauses included are (*a*) the limitation of price by a maximum, (*b*) the statement of discounts permitted for prompt payment again by reference to maxima, and with the proviso that they must be of equal amount under like circumstances to all consumers, and that the demand notes must give particulars of such rebates. Discounts are permissible up to a maximum stated to be granted to large consumers. By the Gas Regulation Act, 1920, twenty consumers may protest to the Board of Trade against a rise in gas charges; the local authority must prove that the increase is due to a rise in costs beyond its own control. Further, (*c*) the charges for gas supplied through a prepayment meter must not be greater than that supplied through an ordinary meter, except for the charges specified for rent and maintenance of meters and fittings supplied.[1] Moreover, local authorities have received powers to impose a charge when the gas supply on any premises is used only as a reserve; this so-called "standby charge" is (as in Section 66 of the Blackburn Corporation Act of 1922 and Section 74 of the Smethwick Corporation Act, 1907) such minimum annual sum as will give the authorities a reasonable return on the capital expenditure, and will cover charges incurred to meet the possible maximum demand. Many local authorities now have and use such a clause, which sometimes states a minimum sum (for example 25s. per quarter for a year), related to the probable maximum supply which might be required for the premises.

Local authorities, therefore, can only compel consumers to pay a flat-rate tariff. The flat-rate tariff is one which is applied to all consumers, without any fixed charge, at a constant price per unit whatever the quantity of gas actually consumed; and tapering, if at all, for all consumers by the same reductions for larger quantities. The intention of the law is to make impossible price discrimination, which is easily practicable and tempting in local monopoly. It does not mean (and the Gas Undertakings Act of 1934 reinforces this interpretation) that local authorities may not group their consumers and charge different rates according to their common characteristics —i.e. give like discounts in like circumstances. This flat-rate system has been largely abandoned in favour of a differentiation between groups of consumers for reasons and on principles to be discussed presently.

THE COMMODITY SOLD

The law also specifies a standard unit for commerce in gas: the thermal quality. Until the Gas Regulation Act of 1920, gas had been sold by volume and illuminating power, since, until the very common introduction of the incandescent mantle and the increase in the use of gas for heating and power, this illuminating candle power was all that was required. New developments in the use of gas, especially for heating and power, resulted in several official enquiries into calorific tests. Then, as a result of the prominence of fuel, power, and heat during the War, the standard was reconstructed by the Act. The Fuel Research Board, in its report of January 1919 (Cmd. 108), said:

---

[1] Yet the practice of many municipalities, in not supplying their prepayment consumers with sufficient information when the meters are being emptied, often defeats this rule. There are cases of slovenly receipts and unchecked collections though these form a very small proportion of all the examples.

> "For the consumers it is of the first importance that they should be served with a cheap and ample supply of gas suitable for heating, lighting, and power purposes on a basis of cost the fairness of which they can readily understand and accept. For the producers it is important that they should be as free as possible to develop those methods of production which will yield the largest and most economical output of potential heat energy in the form of gas from the coal they use. The national interests will best be served by that policy which will promote the widest adoption of scientific methods for the preparation and use of fuel."

Therefore there was established a unit, the therm, one hundred thousand British Thermal units, and the British Thermal Unit is the amount of heat required to raise one pound of water one degree fahrenheit. This is the basis of charge. But the installations of the various local authorities do not produce gas of a uniform calorific value all over the country. They were not all built at the same time or by the same designers. For example, Paisley gets 450 B.Th.U. out of a cubic foot of gas, Barrow-in-Furness 475, Greenock 410, and Market Drayton 520, and Middlesbrough 500. The local authority declares its calorific value. This, by a simple calculation which is usually worked out on the gas department's prospectus or bill, is easily convertible into the price per thousand cubic feet. This used to be the only basis of charge, but now gas undertakings quote their prices in both cubic feet and therms, and measure them by different clocks on the gas meters. To make certain that the gas is up to standard as to calorific value, pressure, and purity, the Board of Trade exercises an inspectorial power over the undertakings. The Board of Trade appoints three persons to act as Gas Referees and a Chief Gas Examiner. These referees are professors of technology, and it is their business to prescribe the places and times at which and the apparatus and method by which, tests shall be made. The actual test is conducted by examiners, being "competent and impartial persons" appointed by the local authorities. The report on the sample is sent to the Board of Trade. The Gas Referees have defined the phrase "competent and impartial," in order to secure technical expertness and independence of the local authority. The chief Gas Examiner, a

Board of Trade official, decides appeals against the prescriptions of the Gas Referees or reports of the Gas Examiners. There are penalties for default by the local authorities or shortcomings of their undertakings. Sometimes local authorities have been in default, with impunity.[1] By the Gas Undertakings Act of 1934, the Board of Trade itself (as from 1939) took over the functions of the Gas Referees, and any appeal lies to a person appointed by the Lord Chancellor. There are severe penalties, £25 per day fine, for supplying impure gas.

As important as a standard of quality is a standard of measurement. In the case of gas, the obligation is on the consumer to consume by meter and the undertaking has the power to require that meters shall be used. The Board of Trade's power over measuring instruments apply to those measuring gas, and these are stamped according to its regulations. Undertakers must appoint meter inspectors, and the Board of Trade provides for their examination and certification. Regulations and instructions for inspectors were established by the Board in 1920. There are rules regarding the consumer's right to challenge the accuracy of the meters.[2]

We may observe at this point that there are also similar provisions regarding the consumption of electricity by meter. Construction and pattern must be approved by the Electricity Commissioners, and apparatus for the testing of these meters must be maintained in a "proper" condition as prescribed and approved by them. Until 1936 the appointment of inspectors of municipal electrical undertakings was at the initiative of the local authorities or consumers, and the appointment was made by the Electricity Commissioners, and earlier than that by the Board of Trade. Very few authorities exercised their powers (and the same held good of company undertakings and consumers) to secure the appointment of inspectors, except from time to time to settle particular disputes between undertakings and the consumer.[3] The Electricity Supply (Meters) Act, 1936, transferred all powers of appointment to the Electricity Commissioners.[4]

---

[1] The Southport Corporation Gas Department's administration was under severe criticism in 1938 and 1939, when the Gas Manager and some of his assistants were accused of supplying gas at a calorific value lower than that declared, and of deceiving the Gas Examiners by preparing a special container of gas, of better quality, for their tests. For details see verbatim accounts in the *Southport Guardian.*

[2] Cf. Michael and Will, *Gas*, 8th edition, p. 242.

[3] Cf. 16th Annual Report, Electricity Commissioners, p. 86.

[4] Cf. Studholme, *Electricity Law and Practice*, pp. 91 ff.

PRICING AND TARIFFS

Those who construct tariffs attempt to distinguish between the economic and uneconomic consumers. The former by the extent of their demand pay not merely for the "service" charges,[1] but also pay for the "commodity charge." The latter, by reason of their small consumption, pay little or nothing towards the "commodity charge," and in some cases are a liability rather than a profit to the undertaking, a liability which must by law be compulsorily assumed.[2]

In order, therefore, to be fair between domestic consumers who take very diverse quantities, and in order to attract industrial consumers away from other competitive fuels and to secure the highest possible load factor, it is necessary to adopt *multipart* tariffs. The general opinion is that for domestic consumers there ought to be two-part tariffs, and for industrial consumers three- or four-part tariffs. The former are based upon (*a*) a "service charge" which covers the expenses of the distribution and sale of gas, and (*b*) the "commodity charge," which is based on the cost of manufacture and supply. In this case, a division is made of the total costs as between these two parts. For the purposes of the three- or four-part tariff there is a more elaborate analysis. There is (*a*) the "customer charge," covering such things as repairs and reading of meters and the cost of collection, publicity, inspectors, and so on, determined by the number of consumers. There is (*b*) the "manufacturing demand charge," for example, the maintenance of works, buildings, retorts, furnaces, coke-handling plant, rents, etc.—expenses which depend on the size or capacity of the manufacturing plant, and remaining fairly constant to whatever degree the plant is working, small or large.

There is (*c*) the "distribution demand charge," that is, expenses dependent upon or varying with the size or capacity of the system of distribution, for example, gas-holders, repairs to mains, principally, and then a proportion of management, distribution, and sales expenses.

There is, finally, (*d*) the "commodity charge," varying with the cost of coal, salaries and wages at works, repairs to works and plant, some rents and some management expenses.

---

[1] By "service" charges is meant the "prime cost" incurred for the rendering of the service to any particular consumer; by "commodity charge," the "overhead" costs.

[2] At a certain point a fresh demand could be satisfied only if the plant, working at full capacity, were enlarged; the question then would arise whether the new demand could pay for the increased "overhead" costs.

The National Gas Council has provided specimen dissections of the two- and four-part tariffs, and these suitably modified usually form the basis of a calculation of whether or not new consumers will be profitable.[1] In January 1933 the Gas Legislation Committee of the Board of Trade reported (Cmd. 4327) that the introduction of two-part charges as a *compulsory* tariff would not be practicable in view of the long history of flat rates unless an intensive educational campaign was first undertaken. Moreover, it is very difficult to adapt a two-part tariff to the prepayment meters. As prepayment consumers represent more than 50 per cent of all the consumers, and account for more than one-third of all the sales, this is a vital point.[2]

The quality of the commodity being determined, and the costs being analysed, the authority must then study the nature of demand in its area. It is essential to group potential consumers into categories with various characteristics, as well as count their mere total number. Local authorities are, in fact, very careful and adept at such census-taking, and their powers in regard to valuation for local rating purposes provide them with a knowledge of their area probably superior to that obtained by a private undertaking, although the rating lists are available for the latter if it really wants to know. On the whole, the total knowledge at the command of the local authority is adequate, not less because the council is representative of the different areas; and, to put it at its minimum even for purposes of electioneering, the candidates acquire a realistic knowledge of the different groups. They also know the extent to which the fuels which compete with gas are available and by custom or necessity used in their area. For domestic uses and for the firing of boilers, there is the competition of oil. For domestic use and industrial use there is the great competitor coal and coke. And most ubiquitous and intense of all, there is the competition of electricity. In some districts, especially in the colliery districts, coal is obtainable at very low prices and small consumers use it almost exclusively. There must be a variation in the prices of gas in different districts to meet this competition.

"For domestic purposes 1,000 cub. ft. of gas (5 therms) will do the work of 1 cwt. of household coal. The local price of household coal per cwt. bag thus determines the value of gas—in Rotherham

---

[1] Report, National Gas Council Committee on Gas Charges, 1928, Appendix E.

[2] The South Metropolitan Gas Company invented a method to cope with this. The meter delivers gas at a price higher than the existing flat rate, and after a quantity of gas above the present average consumption has been paid for, at this rate, all additional gas is charged for at a lower rate.

1s. 5d., Manchester 1s. 9d., and London, about 2s. 3d. per 1,000 ft. These include service and other charges so that the commodity charge must range from 1s. to 1s. 8d. per 1,000 cub. ft. (2½d. to 4d. per therm). Gas is produced by most undertakings at a cost into holder of 3d. to 4d. per therm. These costs could be reduced by a better load-factor and increased output."[1] Mr. Collins, before the Joint Select Committee on Gas Prices said:[2] "Fivepence (per therm) will enable any company in the south, in my respectful submission, to beat coal for all household purposes, but it will not, in many cases, enable a gas company to beat fuel oil as, for instance, in a Diesel engine in a large manufactory or petrol engines on a similar scale, or the Crossley gas engine type—the small productive gas type in works—it will not enable a company to beat that cost of production by other motive agencies at 5d. I am not able to say, though, without further investigation, whether at a price of 4d. per therm, which the company propose, they could do very much to beat electricity or the producer gas for the large consumers. I rather think that to get down to a price which can beat electricity and beat the producer gas, a company must be able to serve at about 3d. per therm."

In some parts of the country there is a considerable amount of purchasing of cooked food in the working-class districts, and (especially in the North) of fish and chips and tripe. Therefore, that aspect of the trade and competition with home cooking must be met. Electricity, which has driven gas for lighting into a very inferior position, is often taken merely as a social distinction and not on grounds of cheapness and convenience only. That also must be taken into account. Even in working-class districts, electricity makes progress for heating purposes as well as lighting. Some electricity companies make a very high charge for electricity if the householder takes any form of gas supply, and indeed, the gas industry has had to organize itself in the National Gas Council in order to meet the onslaught of electricity, fostered as it is by the Electricity Commissioners, the Central Electricity Board, the British Electrical Development Association, the Electrical Association for Women, and the energetic encouragement of successive Ministers of Transport. It is recognized that the problem is as much that of keeping business already obtained, as of extending it. Both industries know that their present total business is only a part of the potential.[1] Electricity supplies only about one-half of what it might, since all the houses, factories, shops, offices, farms, etc., would yield 15 million consumers, and so far there are only 7 million. Further, the number of domestic consumers of electricity is about 6½ million, but there are only 650,000 cookers, 210,000 water heaters, and 120,000 wash boilers. There is obviously a large market still unwon.

---

[1] Cf. J. T. Haynes, sometime Engineer and General Manager, Rotherham Corporation Gas Department, *The Two Part Tariff as an aid to Gas Sales*, Institution of Gas Engineers, 73rd Annual General Meeting (1936), p. 34.

[2] Op. cit., p. 126

Until recent years, gas was mainly a form of lighting. The Returns made to the Board of Trade do not distinguish the domestic lighting load from other uses.[2] Nor do they permit a clear distinction between domestic, commercial, and industrial uses. But P.E.P. estimates:

SALES OF GAS TO CONSUMERS BY ALL UNDERTAKERS

DISTRIBUTION AMONG DIFFERENT USES

Year	Prepayment consumers		Other consumers		Public lamps	
	Thousand million cub. ft.	Percentage of total	Thousand million cub. ft.	Percentage of total	Thousand million cub. ft.	Percentage of total
1920–21	78	33	150	64	7	3
1924–25	93	35	163	62	9	3
1929–30	108	37	171	59	11	4
1934–35	113	39	163	56	13	5

SOURCE: Returns relating to Gas Undertakings.

Domestic, from 60 to 70 per cent.
Commercial, from 10 to 20 per cent.
Industrial, from 10 to 20 per cent.

and this is probably near the truth.

The Board of Trade figures show totals of Public Lamps amounting to about 5 per cent of all gas consumed. Other P.E.P. estimates are that domestic lighting accounted for some 19 per cent of the total of gas consumed in 1920, whereas to-day it is about 7 per cent.[3] Those who have had recent experience of canvassing in working-class areas in London and elsewhere know that there are still many lit by gas—quite a surprising number. However, in spite of the quality of modern gas mantles, and ingenious lighting switches for gas burners, the increasing and successful competition of electricity for lighting purposes shown in the accompanying figures, has forced the gas industry to look for development in all forms of heating and power, domestic and industrial.

---

[1] It was stated in the House of Commons, July 27, 1938, that about 3·7 million domestic premises and about 96,000 farms and horticultural premises had not been connected to the total public system of supply, company and municipal together, at the end of 1936–37.

[2] The Board of Trade Returns are in the form of this table.

[3] *Report on the Gas Industry*, p. 49.

PURPOSES OF CONSUMPTION: ELECTRICITY*

PERCENTAGE OF TOTAL CONSUMED

Year	Power	Domestic lighting	Traction	Public lighting
1920–21	71·4	16·5	10·7	Less than 2 per cent
1926–27	64·2	24·6	9·6	Less than 2 per cent
1930–31	59·2	30·2	8·8	Less than 2 per cent
1935–36	54·8	36·6	6·8	Less than 2 per cent
1936–37	54·3	37·6	6·3	Less than 2 per cent

* Electricity Commission, Return of Engineering and Financial Statistics, etc.

Formerly, the lighting load was almost the only load. There was no diversity, and, therefore, there was little justification for anything but a flat-rate system, with discount allowed for large consumers. Today there is a very great diversity of use. The National Gas Council has asserted that there are over three thousand distinct trades in which gas is used for industrial processes, with an average of seven processes in each.[1] In industrial centres from 30 per cent to 50 per cent is supplied for industrial purposes.

Certainly, if the three main uses alone are taken into account, lighting, heating, and industrial power, there is already a diverse load and the basis for differentiation. Every local authority is therefore a unique price-making unit, with its own special relationship between two sets of variables peculiar to its own area, namely, the competing fuels and the range of uses and the proportion they bear to each other in that area. Therefore, every district must discover a tariff to suit those conditions, and, excepting the basic principle of cost determination, there is a wide variety from area to area. Nor is that all. There is an indeterminateness of cost as we have explained, and this makes for the possibility of further differentiation. "For each and every consumer one or other method of charge is successful, but which is the one so far in advance of the remainder that other engineers are induced to try it out for themselves?"[1]

---

[1] Memorandum to Committee on Fuel and Power, 2nd Report, 1929, p. 24.

The maker of tariffs takes all these things into account. He knows that the larger the total quantities sold the more all prices may be reduced. He takes into account also the hours of the day at which the various consumers will make a call upon the store of gas kept at the works. In particular, the load factor and the diversity factor loom large in the mind of the framer of tariffs. How much the load factor differs as between one authority and another is shown by a survey of tariffs made by the National Gas Council in 1933.[2] Ninety-eight undertakings of different sizes showed a variation in the manufacturing load factor of individual works from a minimum of 26·3 to a maximum of 78 per cent. The average manufacturing load factor was 45 per cent. In other words, these gas undertakings produce 45 per cent of the amount of gas which they would have produced had they been working at full capacity. If, instead of the manufacturing load factor, the average distribution load factor is taken, then for fifty-four undertakings in 1933, it was 24 per cent. There is therefore some capital and labour paid for, but unutilized. Examination of either the Board of Trade Returns, or far better, Field's *Analysis* of the principal undertakings, shows that management, sales, and other charges like rates, taxes, etc., amount to something more than one-half the cost of converting coal into gas ready in the burner.[3] Without a concomitant increase in the latter charges good returns are available if the unused capacity can be brought into saleable production. Hence there is a terrific pressure to get business, and to encourage the loads which possess the highest diversity by offering cheap rates.

Mr. Collins, giving evidence before the Joint Select Committee on Gas Prices previously cited, explained the relationship between his analysis of costs and the framing of his tariff:

> "I go through item by item with the Electrical Engineer or the Gas Engineer, as the case may be, and I have regard to all the local circumstances. I see what the existing tariffs for gas are. I see what the result has been of endeavours in salesmanship to develop this or that load. I look at what the competing electric tariff is. I find the price of coal, and I look at the price of fuel oil and I say: 'Now what we want

---

[1] W.B.McGlusky, Engineer and Manager, Halifax Corporation Gas Department, *The Gas Account*, Institution of Gas Engineers, Annual General Meeting, discussion, p. 42.

[2] Cf. *Memorandum on Methods of Charge*, March 1935; also *Tariffs as a Means of Gas Sales Development*, November 1935.

[3] Cf. table, p. 251 supra.

> to beat A, B, C, D, and E, of those competitors is so and so. Unless our costs can show us that we can do that, we must forfeit that customer.' That usually is how it is done. It is not that you are directed to go to the Accounts and split them up into these three sections and say: 'What does it show?'
>
> "That is very nice when you have an existing tariff, the operation of which you can see. If you were constructing a new tariff, you cannot do that?—Oh, yes, you can—you have to; you take your tariff, whatever it is, and you weigh all those things up. I should say the strict analysis of the Accounts in the practical application of tariffs does not account for more than 25 per cent of your decision.
>
> "It does not seem to account for that if you do not make one, as I gather you do not?—Yes, I do.
>
> "You do make analyses?—Yes. You asked me, I thought, what I took into account in framing a tariff.
>
> "No, I asked you if you made an analysis?—Yes. If a reasonable analysis does not show that you can supply your heavy industrial load at 4d., well, you just cannot do it."

One other thing has to be taken into account in the actual fixing of prices and that is the receipt from residuals of the manufacture of gas: coke, tar, and sulphate of ammonia.

AMOUNTS REALIZED FOR GAS AND RESIDUALS RESPECTIVELY FOR YEAR ENDING IN 1937

	Total from sale of residuals	Total income	Percentage of (1) to (2)
	£	£	Per cent
Birmingham	575,163	2,528,776	23
Bolton	34,442	211,133	16
Bradford	94,979	395,454	24
Carlisle..	18,487	108,504	16
Leeds	151,247	662,950	23
Leicester	69,309	522,284	13
Manchester	217,106	1,249,940	18
Nottingham	101,356	514,754	19
Oldham	56,891	272,785	19
Rochdale	26,703	150,047	17
Salford	81,010	351,390	23
Widnes..	23,141	83,310	28
Edinburgh	160,785	636,461	25
Glasgow	350,172	1,614,800	22

SOURCE: Field's *Analysis*, May 1938.

In other words, the sale of residuals yields between about 12 and 25 per cent of total receipts, or is between 1d. to 2d. per therm at 8d. per therm. Nor is that all. The authority may choose inferior quality gas at lower prices to take advantage of a favourable local market for coke. This again affects the price of its plant.

The evolution of price policies in this country has been roughly sketched by Mr. McGlusky, the Engineer and Manager of the Halifax Corporation Gas Department.[1] He observes that although the price of gas has always been low, nevertheless schemes of reduced charges for all gas above normal requirements were introduced as early as 1891. In 1905 the "Perth Parcels Scale" was introduced, on a system now called the "Block Tariff." Under that system the consumer paid half a crown for one thousand cubic feet for the first parcel, less for each succeeding parcel, and only one shilling for the last. In 1907 the Norwich Electricity Supply Undertaking, followed shortly by several municipalities, adopted a multi-part tariff. A little later, the Glasgow Electricity Department introduced the "maximum demand system," where a number of pence per unit is charged for the first two hours' use of the "maximum demand," and so much per unit for all going beyond that level. Halifax in 1912 introduced the first "block tariff" for industrial purposes, various blocks varying in price in accordance with the maximum hourly demand of the individual consumer. Then, in 1917, the same corporation introduced the so-called Standard Requirements Scale, whereby the consumers paid the flat rate for all gas used up to eight hundred hours of the average lighting requirements of the living and reception rooms, and then a smaller price for gas used in excess of that quantity. In 1922 there was introduced the two-part tariff, once again in Halifax. In this system a fixed charge was made, in this case per quarter (though it need not be), by relationship to the amount of the standard requirement of gas per annum (though it may be fixed according to other bases, e.g. number of living-rooms, or total space, or rateable value) and the fixed charge rises proportionately with the standard requirement per annum, the fixed charge being made to all consumers from zero up to the first division of the standard requirement. Then a tapering price is paid for quantities in excess of the standard requirement, in addition to the fixed charge therefor.

All these devices are in use, though the two-part tariff has been adopted so far only by less than a dozen municipalities. Even then the system is optional to the consumer, and only a small number of them have as yet accepted it. The fact is, that although it is the really equitable system, whereby every consumer pays roughly his share of the heavy standing charges, it is recognized that to compel acceptance may cause the consumer to buy other fuels or illuminants or go elsewhere, while to persuade him is difficult. In the course of a discussion at the Seventy-second Annual General Meeting of the Institution of Gas Engineers,[1] Mr. T. P. Ridley, of the Newcastle Gas Company observed:

---

[1] Publication No. 111-16, Institution of Gas Engineers (and *Proceedings*), 1936. Cf. also Chantler, *The British Gas Industry*, chap. v.

> "The disadvantage of a service charge is . . . that the consumer has to commit himself to the payment of it. In other words, you have to sell it to him and get a contract signed for it before you start to sell additional gas, whereas you put a block system into operation wholesale, and your salesman's energies and your publicity can be immediately concentrated on the selling of more gas as a result of the more attractive terms. In our experience the payment of a service charge by domestic consumers is not more conducive to pleasant relations than the block rate and with some consumers who with the service charge had to pay more in the summer quarters than on the general rate it had the reverse effect. Besides, the block rate is more easily applied to prepayment from consumers who represent a large proportion, in many cases, the majority, of consumers."

A recent theoretical essay[2] demonstrates that a compulsory and exclusive two-part tariff, used by an undertaking bent on maximizing its profits, would have a generally bad economic result because it could be used to extort from each consumer the maximum which would still retain his custom, and that the amount he would pay would cause him to forgo the consumption of other commodities in an undue measure. Such perfect discrimination between individual customers would not, he thinks, be permitted by public opinion. Nor would the rapacious monopolist be able to make universally reliable guesses as to the fixed charge which would retain customers. Hence the latter must be induced by an ordinary single price tariff, at their option. The experience of local authorities in both gas and electricity bears out this reasoning. Local managers are, despite all argument, unsure of the perfect single method of getting the maximum consumers and maximum return. One consideration differentiates the case considered from municipal enterprise: it is not a "profit-seeking" monopoly.

Let us now make a short survey of the practices of local authorities based among other things on our own direct survey of a sample of them.

---

[1] Op. cit., p. 48.

[2] Cf. Paine, "Some Aspects of Discrimination by Public Utilities, *Economica*, November 1937, pp. 425 ff.

The simplest method would be to charge uniformly; and to charge without measuring the amount supplied. The former cannot be done, because it would affront the sense of justice as between the diverse consumers. The latter also is inapplicable: it would be working on the assumption, which is fairly accurate only in water supply, that all consumers will take roughly equal amounts. Therefore, there are different charges; and, therefore, the amounts taken are measured by meters, some authorities charging for the fixing of them and others (for example, Halifax and Rhondda), feeling that it pays to install them free of charge. There is also the widespread practice of dealing with the poor consumers, whose numerous steady small consumptions are in many parts of the country much preferred to the large industrial consumers, by the installation of prepayment meters. "Ten domestic consumers each with an annual consumption of 100,000 cub. ft. are better than one industrial consumer taking 1,000,000 cub. ft."[1] In prepayment meters, the price shown on the meter includes the rental for the meter and, in some cases, for example, Leeds (where appliances are supplied on hire-purchase terms), the meter registers the cost of this also in the price per unit of gas.

The distinction is then widely made, especially, of course, in the industrial towns, between the domestic consumers and the various classes of industrial users. A great deal, for example, is being done to stimulate the use of gas for central heating, and the gas undertakings have made strenuous efforts to devise methods of transforming coke and oil-fired boilers to gas-fired boilers. Here is an example from Leeds. The scale of charges supplied through the ordinary domestic meter commences at 3s. 9d. per 1,000 cub. ft. (9·57d. per therm) for the first 5,000 cub. ft., and 2s. 8d. (6·81d.) from 5,000 to 16,000 cub. ft., the amount up to 16,000 cub. ft. being one step in a succession of seven. The scale of charges for central heating only, per quarter, going in the first step up to 100,000 cub. ft., is 2s. per 1,000 or 5·1d. per therm. Again, for gas-furnace consumers, Oldham has a special tariff beginning with a step of a quarterly consumption up to 50,000 cub. ft. at 3s. 1d. for 1,000 or 7·789d. per therm. The discount for payment within the first month of the next ensuing quarter is 10 per cent.

Bury Corporation says in its gas leaflet, "In order to encourage the use of gas for steam raising and circulating boilers the Corporation has now adopted a very much reduced scale of charges for gas used for this purpose." Its scale begins with a step of annual consumption of from 400,000 cub. ft. up to 600,000 at 1s. 9d. This may be compared with the ordinary annual consumption charges of 3s. 1d. per 1,000 cub. ft. for the first 60,000 going by stages of 2s. 9d., 2s. 6d., 2s. 3d., 1s. 9d., 1s. 6d., and 1s. 3d. Nottingham distinguishes between (*a*) lighting and domestic cooking and heating; (*b*) all industrial processes other than power; (*c*) large industrial consumers; (*d*) gas engines; (*e*) central heating, and central water heating in approved boilers.

---

[1] Haynes, loc. cit., p. 34.

Experiments conducted by the Macclesfield Corporation since 1923 have taken special note of different seasonal consumptions: the summer load is only two-thirds of the winter load. There was introduced a block system of charge with seasonal differentiation and different discount for cash in winter and summer—together making 7½ per cent in winter and 50 per cent in summer. This brought about an increase of consumption of 17·6 per cent in winter and 27·8 per cent increase in summer. The total amount of gas sold increased by 35 per cent and the average price was halved in the course of ten years. Both the developments were put down to the tariff method of charging. In Halifax there are the following scales:

(1) General rate for all premises tapering with the amount consumed.
(2) Two-part scale for domestic purposes, being a service charge based on the floor area of living and reception rooms + a tapering charge above 48,000 cub. ft. per quarter. (There is a minimum charge per quarter of 7s. 6d. whether gas is used or not.)
(3) Two-part scale for any domestic, commercial, or industrial purpose (houses, shops, workshops, warehouses, offices, public buildings, hotels, cafés, etc.). Here the charge is related to the demand per hour and the load. And the maximum hourly demand has to be defined and is defined as the maximum volume of gas which the meter indicates that the consumer may call for.
(4) Domestic coin meters (including appliances).
(5) Coin meters for business premises (hotels, boarding houses, and clubs, etc.)
(6) Gas for central heating, water heating, individual radiators, and other purposes for which gas may be required for use over long periods or in the evenings or night-times, or for lighting additional to the above. This scale is based on the maximum hourly demand multiplied by the hours in use. On top of this there is a differentiation between the winter quarters and the summer quarters.[1]
(7) Storage water heaters at a rate per quarter and according to size, the heater being supplied and fixed at an inclusive charge.
(8) High pressure gas lamps for shop-window lighting where candle power is taken as a basis of charge per annum and the lamps are lighted at dusk and extinguished at 10 p.m. over an agreed period.

---

[1] As in Macclesfield and a few other places to improve the seasonal load.

(9) Private gas lamps including cleaning, maintenance, and gas supply to a single burner for stated lighting periods during the year.

(10) Bakehouses or for large-scale central heating beginning with a step of 1,000,000 cub. ft. per quarter, the consumer being compelled to pay a minimum amount per annum equal to a consumption of $\frac{3}{4}$ of his maximum annual requirements as estimated by the gas engineer whether gas to that amount is used or not.

Thus, Halifax[1] has contrived to introduce in one authority almost all the conceivable permutations and combinations of method and price, plus a firm rejection of the inducement of discount, plus penalties for non-payment, plus the discretion of the engineer as to the acceptance of orders. One other point may be noticed. In scale (10) there are saving clauses regarding the price of coal delivered at the gas-works and the wages of gas-workers. This is a common practice in both this and electricity tariffs.

There are one or two other ways in which local authorities vary their charges. To penalize the practice of taking a supply of gas merely as a standby in case other light and heating should break down, some local authorities make a special standby charge. Thus, Rothesay charges 5s. per annum where the gas consumed does not exceed 21 therms per annum, which, at 10·75d. per therm would be about 19s. of gas per year.

Secondly, local authorities supplying areas beyond their own municipal boundaries often charge less to consumers within the municipality and more to those outside. Leicester, for example, in each of its tariffs, charges one price inside the city and two others outside the city, less within the "inner" and more in the "outer" circle. What this may mean in terms of charge can be seen by this example for domestic consumers. Three or four rooms each bear a weekly charge of 6d. Gas is then charged at the rate of 6·6d. per therm. The "inner circle," outside the city, pays 0·8d. per therm extra. The "outer" circle pays 1s. 7d. per therm extra. There are many other examples of these differential charges. Their justification in terms of cost of production is perfectly clear: gas pumping for long-distance transmission is, as we have indicated, a heavy charge. Moreover, the philanthropic feeling and the feeling of responsibility tend to be concentrated within one's own local community. Parliament, however, has of recent years shown a tendency to abolish or diminish the higher charges to places outside the municipal area of the supplier.

---

[1] Its Engineer and Manager, Mr. W. B. McGlusky, M.Inst.Gas.E., is one of the most energetic pioneers in pricing policy.

Thirdly, it is interesting to compare the charges made for public lighting with those made for private consumers. A survey of the actual tariffs shows that municipal Gas Departments charge the Street Lighting Department for public lighting something slightly below the charges made for the usual industrial and commercial uses of the gas, and at cost for maintenance and service. There is not a great reduction, and, in regard to some quantities consumed, the amount charged would be higher than what is paid for industrial and commercial purposes by very large consumers. This is accountable for by the different time of consumption. Public street lighting comes on in normal weather at a certain calculable time from dusk, and is used during the hours when the industrial and power load is not in use. A comparison, therefore, has to be made between a price which must be paid during those hours (excepting that there is competition from the Electricity Department), and the prices charged to industrial and power users, which must be especially attractive. Generally, one can say that the price charged for public street lighting stands well below the charges for domestic lighting and general purposes, which are the highest rates, and above the industrial, commercial, and power uses which taper rapidly away to induce consumption. Thus, in Leicester the charges are, for public street lighting for the first 10,000,000 cub. ft. 8d. per therm; for the next 10,000,000, 6·6d.; and for all over 20,000,000, 5·3d. For lighting and general purposes (without a fixed charge other than 2s. per quarter for each meter installed), the charge is, for the first 10,000 cub. ft., 9·7d.; tapering down to 8·2d. for all gas in excess of 1,000,000 cub. ft. For industrial and commercial purposes the charge for the first 10,000 cub. ft. is 8·74d.; and then there is a drop which becomes particularly rapid when over 1,000,000 cub. ft. are taken, falling finally to 4d. per therm for all gas over 4,000,000 cub. ft. For power purposes there is a tapering scale similar to the foregoing, but beginning with a figure as low as 6·35d. per therm. Furthermore, special agreements are made with consumers guaranteeing a consumption for central heating, and other boiler-firing purposes of not less than 16,000,000 cub. ft. per year, when the charge is at the flat rate of 4d. per therm. A somewhat similar relationship exists in other local authorities between the various categories of consumers and the public lighting supply.

A question of principle has been raised on this matter, the Gas Departments being anxious to get the load and to improve their revenue while the Street Lighting Department wishes to show as small a budget as possible. Many people argue that, as this is a case of mutual trading, the Gas Department should charge only the actual cost. But it is extremely difficult to find what is the actual cost of this particular load, especially as there are variations in the quantity consumed from year to year, owing to different amounts of fog, mist, and dull days. Therefore the practice, quite properly, is to treat the other department of the local authority on the same principles as any other user.[1] One might, in fact, on the basis of charge applied to power users, charge them less than the calculable cost for them. Mr. Carson Roberts gives an illustration taken from the actual accounts of a borough to show that it is impossible to take cost price as a guide. He actually takes public lighting by electricity. He says that the average cost of units generated and sold was 1·5d., and with load service charges the cost was 2·86d. But the load factor of the demand for public lighting was about three times as good as that of the average lighting demand, and a big private consumer would be charged for a similar supply about 1·1d. per unit. To have taken the cost-price calculation would, therefore, have been extortion. As a matter of fact the department was charged less than 1d. per unit, and it was still possible to prove that this demand increased the profits of the trading undertaking. Nevertheless, local authorities must be careful that they neither give a hidden subsidy nor take a surreptitious profit by either deficient or excessive charging to the consuming department. There are temptations either way. Naturally there is a good deal of rivalry between the Electricity and Gas Departments of municipalities where both are operated. An estimate made by the gas industry gives 800,000 gas lamps in Great Britain and Ireland and says that there are two gas lamps for every electric lamp. The central bodies of the two industries are strong in the pursuit of business;[2] both try to secure long-term contracts.

In pursuit of the ideal method of charge within the given existing capacity for production, to secure the largest consumption and the lowest cost of production, there is an extraordinary amount of experimentation with tariffs.

The experimentation and the complexity of the resultant tariffs is due also to the fact that it is necessary for the undertaking to provide for the economic differentiation of the commodity sold Except in the physical sense, neither "gas," nor "electricity," nor "transport," nor even "water," is a homogeneous commodity. The technical composition of each is only one element in the combination of properties for which the consumer pays—the others are time, place, availability, service. To charge a *flat* rate irrespective of the special combination of these factors necessary to satisfy consumers in different circumstances would be in effect to discriminate between different consumers. The methods of charge we have described did not come suddenly and completely at a stroke for all time. There has been in every local authority, and there is continuously, a most alert experimentation. It is, of course, the only way in which the total demand, the diverse demands, and the elasticity of each kind of demand, can be gauged. In this respect, the local authorities are as inventive experimenters and as quick-witted as the statutory companies. The sense of popular responsibility, which tends to make them rather slow to discard ageing assets and assume fresh debts, operates beneficially in the contrivance of tariffs because, besides the evidence of the balance sheet regarding commercial success, their

---

[1] Profits, if any, on supplies to other departments of the corporation are exempt from income-tax on the ground that one cannot make a profit out of oneself. This is an encouragement to charge high prices.

[2] Cf. the interesting observations in Ministry of Transport, Departmental Committee on Street Lighting, Report, August 1937, and *Light on the Roads*, published by the British Commercial Gas Association. Cf. also *World Power Congress, Vienna, August* 1938.

PUBLIC LIGHTING IN CERTAIN TOWNS

Towns	Number of electric lamps	Number of gas lamps	Electric as percentage of total
Large Towns:			
Birmingham	5,927	35,146	14
Bradford	4,708	12,842	27
Leeds	1,309	20,158	6
Leicester	3,229	5,815	36
Liverpool	14,849	16,279	48
Newcastle	6,995	11,398	38
Nottingham	2,651	6,096	30
Medium-sized Towns:			
Canterbury	1,023	—	100
Batley	40	1,148	3
Colwyn Bay..	206	942	18
Farnworth	887	218	79
Small Towns:			
Burgess Hill	58	174	25
Crompton	108	415	21
Eton	185	42	81

attention is directed and compelled to consumers who are also electors. It might be mentioned that extraordinarily large consumers may be offered "special" contracts (as in the case of electricity and water also); and such contracts are given a special attention by the relevant committee in consultation with the manager. The evolution of flat rates and two-part, three-part and four-part systems and the rest is even causing a certain amount of anxiety in the profession of gas managers and engineers because they recognize that consumers want simple tariffs. They are appalled by the history of tariff making in the electricity industry which is like a close view of a jungle.[1]

Even where the electricity undertaking is in the hands of the local authority there is apt to be severe competition. Mr. J. T. Haynes, formerly engineer and General Manager, Rotherham Corporation Gas Department, reports on his experience in Rotherham as follows:[2]

> "A report on the twelve months' test was submitted to the Gas Committee which recommended the Town Council to authorize the Two-Part Tariff as an optional method of charge to all domestic consumers. The Electricity Committee raised severe opposition, on the ground that the availability of cheap gas would be detrimental to the development of the sale of electricity for household purposes—the right of the consumer to have cheap gas as well as cheap electricity appearing to be a secondary consideration. The matter was referred to a Joint Gas and Electricity Sub-Committee which considered a report by the Borough Treasurer on the financial aspects and finally approved the Gas Committee's recommendation. Thus, with the Council's authority, the Two-Part Tariff was made available to all domestic consumers on 1st February 1934."

It is very interesting to notice how cautious and yet how experimental must be the application of the multi-part tariffs, and how these conditions are fulfilled by the practice of local authorities. In Rotherham the experiment of a two-part system was undertaken on a small number of Corporation tenants with the co-operation of the Housing Department. And not until the results were available of the small experiments made on ten samples of large and small families was the matter carried any further.

---

[1] Mr. Larkin, later Treasurer of Coventry (quoted *Municipal Review*, 1934, p. 14) acknowledges the use of the empirical method of arriving at existing charges, but thinks it has been overdone, that is, that scientific analyses have played too small a part. He says: "It is probable that few will disagree with my assertion that the fixing of prices in municipal undertakings is chaotic, and the reason is no doubt due to the uncritical acceptance by the trading committee of the recommendations of officials. In no branch of municipal work has the empirical method been so unjustifiably followed. In transport, for example, the hit-or-miss method of fixing fares is almost universal. Electricity and gas charges will hardly stand being looked into. The domestic consumers are the subject of a monopoly, and therefore cannot really complain. Those consumers who are not the subject of a monopoly—i.e. those who could satisfy other demands from another source—are probably being charged a lower price than the facts justify and there is therefore no risk of the loss of their custom."

[2] *The Two-Part Tariff as an Aid to Gas Sales*, 73rd Annual General Meeting, Institution of Gas Engineers, Publication No. 132–31, 1936.

THE SALE OF RESIDUALS

It was observed that the manufacture of gas from coal can be so conducted as to leave certain saleable by-products or residuals. These are coke and breeze, benzole, sulphate of ammonia, and tar. Their sale makes a difference of some 12–52 per cent of the price of gas. Local authorities, like gas companies, make a decision regarding the quality and price of gas in relation to the quantity and prospective prices of the residuals, to achieve the maximum return. This is by no means an easy matter to carry through. Among other things it involves the type and cost of the plant, the selection, blending and testing of the coal to achieve the result desired at the cost estimated,[1] and marketing the products. The marketing of coke is undertaken either through joint marketing schemes or by the individual efforts of the local authorities. In the London and Home Counties Coke Association (founded in 1931) one hundred and forty-five producers are combined for the marketing of nearly 99 per cent of all the coke produced in the area. The Association fosters the production of marketable qualities, grades, and fixes prices. There are two other marketing associations, Midland and North-East Coast. To a large degree marketing will always remain a local concern, since transport costs are high; it is necessary to make a coke which will fit local demand, and the kinds of demand vary from place to place in totals and proportions.[2] For example, while the London and Home Counties Association trade fell into 47 per cent for domestic coke boilers, 35 per cent for large-scale central heating, 14 per cent industrial purposes, and 4 per cent for domestic open fires, Stretford sold 59 per cent to industrial, 8 per cent for domestic open fires and small boilers, and 43 per cent to central heating, bakery, and other industrial purposes. Some local authorities sell to consumers directly; others sell through local coal and coke merchants.

---

[1] On this subject cf. W. L. Boon (Manger, London and Home Counties Gas Association), "The Preparation, Marketing, and Utilization of Coke," *Proceedings*.

[2] Cf. Board of Trade, Report Departmental Committee on Area Gas Supply, para. 54, where it is shown that in over 70 per cent of all coke produced was sold in the area of the gas undertaking.

Tar is either treated by municipal tar distillation works and the products sold or used, or (by far the largest amount) it is sent to tar distillers for treatment and sale. Tar distillers who process the crude tar are organized in eight regional tar pools. Marketing and handling occurs most usually through these associations, organizing which is the National Association of Tar Distillers. The crude tar is supplied to the regional pools at the selling price of the products less the distillation and marketing costs. The Association fix prices and supplies and qualities, advertise the products, and push sales.

The gas industry in 1936 produced about 29 per cent (about 18 million gallons) of all the benzole (motor spirit) manufactured. The recovery of benzole is profitable (by comparison with the price of petrol, the ruling consideration) only in large gas undertakings. Local authorities produce about one-fifth of the total recovered at gas-works. The smaller works send their crude benzole for refining to the nearest refining-member of the marketing organization, which is the National Benzole Association. Most of the local authorities recovering benzole belong to the Association. Some authorities prefer to remain outside. Glasgow, notably, strives always for an independent marketing policy.

Where local authorities recover ammonia, rather than let it run away to pollute the streams, it is converted into the agricultural fertilizer, sulphate of ammonia. In the calendar year 1936 the total produced was 328,250 tons, of which municipal gas undertakings produced about 14,000 tons. The Sulphate of Ammonia Association, Ltd., includes the municipalities. The price is fixed by the Association. Members may sell at the stated price locally. Whatever they do not dispose of themselves is sold by the Federation [illegible] half the total amount is sold abroad.

Chapter Eighteen

ELECTRICITY CHARGES

We have already given some attention to the nature of electricity from the standpoint of its load-factor problems. Whereas water and gas on demand need only to be transported from a reservoir or gasholder (water sufficient for weeks or months, gas supply for a day or two to even out the daily load are stored), when the consumer switches on, the electricity has actually to begin to be manufactured. The consumer has a claim on plant and its capacity. His claims may operate capriciously and involve the undertaking in great expenses of manufacture or payments to those from whom it buys in bulk. Hence, earlier and more emphatic insistence by electricity undertakings on the need for securing from him some steady payment to meet the fixed charges which are so heavy in proportion to the total; great efforts to encourage consumption which raises the level of the valleys in the load curve without raising the peak; and, therefore, a great diversity of tariffs designed to attract some demands and penalize others.

Taking the country as a whole, there is an extraordinary combination of charges to meet the amounts and times of consumption. As with gas, there is the competition of alternative fuels, and also the existence of private generating plant in factories.[1] As to the competition of gas, we were able to appreciate its intensity in the course of the preceding account of the charges for gas.

[illegible] statutory basis of electricity charges is as follows: every person [illegible] is on application entitled to a supply on [illegible] which any other person in such part of the area is [illegible] similar circumstances to a corresponding supply. There mus [illegible], in other words, be undue preference. This is the effect of Sections 19 and 20 of the Electric Lighting Act of 1882. But the courts have held that undue preference would not be shown if rates were charged varying according to the amount of energy consumed, the uniformity of demand, the time of the day of consumption, and the expenses of supply. It must be admitted that this gives indeed, a wide opportunity of meeting the technical and economic necessities of the case. It will be noted once again, as in the case of gas, that a supply *must* be given, but this is not unconditional. The Electric Lighting (Clauses) Act of 1899 and Provisional Orders prior to that date, contain the conditions to be observed by any owner or occupier requiring a supply.[1] We need not go into details; they relate to the distance from the distribution mains and a written contract to receive and pay for a supply for at least two years, of such an amount as to furnish a guarantee on the undertaker's outlay.

---

[1] Cf. an excellent discussion of the problem of "developing the power load" now in private factories' hands, I.M.E.A. Convention 1934, paper by H. C. Lamb (formerly Manchester Electrical Engineer) and W. E. Swale. Bolton, *Costs and Tariffs in Electricity Supply*, p. 202, suggests that only 60 per cent of the power used by all trades, excluding utility services and Government Departments, comes from authorized undertakings.

The obligation to supply may be very onerous on a local undertaking. Customers cannot be turned away as Lyons' could turn away people if the place were full. Evidence regarding this burden was given before the House of Lords Select Committee which considered the Wimbledon Corporation Bill of 1933. By a Clause of this Bill the Corporation sought relief from the general stipulations of the law, for under this a single new consumer can make effective the obligation to [illegible]ply, even if it means laying a main. The Wimbledon Electrical [illegible]r adduced a recent case where a special transformer had to b[illegible] meet the conditions set up by a 20-h.p. motor installe[illegible] Corporation were mainly anxious about the bu[illegible]mands for power. They were prepared to cont[illegible]nywhere at demand. The Committee rejected the C[illegible] had been opposed by the Ministry of Transport on the grou[illegible] it would put obstruction in the way of changing demand, a[illegible] argued that undertakings would recoup themselves out of th[illegible] increased demand that might be anticipated from the existence of added capacity to supply

Coupled with the stipulation regarding un[illegible] maximum price established by the private Act or [illegible] taking. These maximum prices may, by the Electri[illegible] 1922 (Section 22) be revised by the Minister of Transp[illegible] effectively, the Electricity Commissioners) on the application of the operators of the undertaking or twenty consumers. Quite a number of complaints are made to the Minister. Often these are unreasonable and founded on ignorance and ill will. Where, however, there is cause for intervention, a process occurs which is variously described. By the Ministry it would be called "inducing the local authority to see reason in a friendly atmosphere"; by an outsider the "use of the Minister's good offices"; by some local authorities "giving them a rap over the knuckles."

---

[1] Will's *Electricity Supply*, 6th edition, p. 127.

Further, the joint effect of the Electric Lighting (Clauses) Act of 1899 (Schedule) and Section 22 of the Electricity (Supply) Act of 1922 is to provide that, *in the absence of agreement*, methods of charging ordinary consumers must be based on (*a*) the actual amount of energy supplied, or (*b*) the electricity contained in that supply, or by (*c*) such other method as may be approved by the Minister of Transport. Hence, the making of a multi-part tariff under those statutes, is possible only by agreement or with the approval of the Ministry of Transport. Otherwise, "actual amount of energy supplied" must mean a flat rate which may taper, but not a fixed charge.

The Electricity Supply Act of 1926 (Section 42) introduced an important change: the charge might consist, *if duly authorized*, of a periodical fixed or service charge, and in addition a charge for the actual quantity of energy supplied to the consumer. The fixed charge might also include the rent for meters, electric lines, fittings, apparatus, and appliances supplied. Such a two-part me d of charge may be authorized by Special Order, or by the M approval under the Act of 1899, or in a private Act. S pproval might provide, where expedient, for an o sumers to be charged by an authorized altern

Under these provisions local aut) have instituted an extraordinary variety rts, for it is argued by the technical Press, go mental committees of enquiry, and the Electricity mmissioners, that a multi-part tariff is essential to the successf development of electricity con- [1] By 1930, of 373 public authorities, 220 were offering t for domestic supplies; and a survey made city undertakings, private as well as municipal, show basis of the fixed charge was 125 on rateable value, 81 on floor a, 69 on the number of rooms, and 38 on the lamps installed. The variety is due to the diversity of local circumstances, and especially to the highly variable local importance of domestic lighting. This is the backbone of all systems of charges for electricity, since electric lighting is so superior to gas in simplicity, cleanliness, and non-heating quality as to give it almost a monopoly. But in the opinion of many authorities, the forms of tariffs were not always the most desirable, and therefore in 1925[1] and 1930[2] the Electricity Commissioners appointed a Committee of technical experts, both public and private, the representatives of consumers' associations, to enquire into the existing methods of charge and make recommendations for the future.

---

[1] Bolton, *Electrical Engineering Economics*, p. 257.

The Committee of 1930 observed that all local authorities were operating under one or the other of the two flat-rate methods, namely amount of energy supplied, or electrical quantity contained in supply, and together with the great majority of such flat rates there were minimum quarterly charges. Most local authorities have under the Act of 1922 established a multi-part tariff with the approval of the Ministry of Transport, but the Ministry has insisted that the Corporations should offer the consumers the alternative of flat-rate system. Where such alternatives are offered, this means that the charge is made by agreement with the consumer. Here the consumer exercises an option on the tariff which suits him. If a multi-part tariff does not come together with an option to be charged by the alternative flat rate, the power to charge in this way must have been obtained by some statutory authority, and it is then within the power of the local authority to compel a multi-part tariff, or to offer choices. These tariffs, the statutory tariffs, are revisable triennally by the

SALES OF ELECTRICAL ENERGY TO CONSUMERS BY ALL UNDERTAKERS (INCLUDING CENTRAL ELECTRICITY BOARD)

1937–38

DISTRIBUTION AMONG DIFFERENT USES

Uses for which sold	Units sold		Revenue from sales		Average revenue per unit sold
	Millions	Percentage of total	Million £'s	Percentage of total	d.
Lighting, heating and cooking ..	7,348·5	38	51·85	62	1·693
Power	10,422·2	54	27·91	33	0·643
Public lighting ..	341·1	2	1·51	2	1·063
Traction	1,151·0	6	2·80	3	0·585
TOTAL	19,262·8	100	84·07	100	1·047

SOURCE: Annual Report of the Electricity Commissioners.

---

[1] Advisory Committee on Methods of Charge, Electricity Commissioners, Report, July 1926.

[2] Report on Uniformity of Electricity Charges and Tariffs, pp. 55–156, 1930.

Minister of Transport, at the application of a certain number of consumers, though they are at a considerable disadvantage in substantiating a case for revision, as they do not possess full and accurate information of the load factor and the charges. The Committee strongly recommended the basing of the tariff upon the distinction between the standing charges and the secondary or unit charge, and laid down the general conditions on which a *domestic* multi-part tariff should apply as follows:

> "(*a*) The aggregate amount of the individual fixed charge should provide sufficient revenue to cover all the standing charges incurred in giving the supply to the consumers on the multi-part tariff.
> (*b*) The basis adopted for assessing the fixed charge should be available to consumers, and not be subject to adjustments which are not disclosed.
> (*c*) The 'secondary' or unit charge should be as low as practicable.
> (*d*) The tariff should be simple in character, readily applicable to any type of domestic consumer, and equitable both to consumers and the Supply Authority.
> (*e*) It should involve the smallest possible expenditure on the one hand by the Supply Authority on apparatus (e.g. meters), and, on the other hand, by the consumer on wiring.
> (*f*) It should not entail either periodical or unexpected visits of inspection to the consumers' premises; consequently in allocating the fixed charge regard should be had to the consumers' premises as a whole."

Proceeding from this basis, the Committee examined the various bases of the fixed charge as observable in the practice of supply undertakers. These are the rateable value, with variations as to its application; the lighting wattage installed; the block or step method; the maximum demand tariff; the number of rooms basis; the size of the houses basis; and a composite of some of these factors. A word or two on these different bases is appropriate.

The rateable value basis is taken and (*a*) a percentage of the rateable value is the fixed charge, to which is added a charge per unit, sometimes differentiated between summer and winter; (*b*) or the percentage increases slightly with the rise in rateable value; (*c*) or there is a fixed sum attached to a scale of rateable values rising progressively as these increase; or (*d*) there is a percentage of the rateable value, and then the charge per unit tapers in accordance with amount consumed, and so on and so on. The main fault of this basis, as everybody knows, is the inexact relationship between rateable value and the value of the house, or its size, or the ability of the inmates to pay. Consequently, quiet adjustments have to be made on this basis to render it more equitable to those who complain. Those who do not complain remain the subjects of an unjust charge. There are difficulties consequent upon periodical increases in the rating assessment. And the rateable value method is unduly preferential to consumers with low assessments. The method is particularly unworkable in rural areas. Where a single rating district includes belts of property markedly diverse in character, the system has to be abandoned for the "size of house" basis. Since the area of electricity supply either by the statutory powers, or by Special Order, frequently goes beyond the area of the single municipality, there are complications because the rating assessments vary from area to area. Nor is that all. Authorities find that if the price of electricity is to be based on rateable value, the problem of assessment, already difficult enough, is aggravated.

In the lighting-wattage-installed basis, the standard taken is the average wattage installed, and this must be modified by reference to the spaces and rooms which are not as important in the lighting demand. The difficulty is that (like the ancient taxes on windows) the consumer is tempted to have the minimum installations possible, and the less important rooms and corridors are left unwired. Moreover, this method is dependent upon the honesty of the consumer who may without announcement change his installation, and consequently, either the local authority must risk a loss, or it must conduct periodical and costly inspections.

Where the number of rooms is used as a basis, one arrives closer to a rational standard of charge. But if there is no discrimination between a house with small rooms and one with large rooms, this basis favours the latter. Therefore, local authorities have more and more been changing over to the *size* of the house, particularly of the "active" rooms. The actual measurements are taken and added together, or some estimate is made, to get the floor area.

The Committee whole-heartedly recommend the size of house space for the fixed charge, on the grounds that the floor area is related to the consumer's probable demand, that this basis does not restrict the size of his installation, and that it entails only one inspection of the premises. With this as a basis the Committee thought that the supply authority could make a multi-part tariff which could give electricity at a cheap rate, and that by a method of calculation convenient to the consumer. He would be unrestricted as to his choice between using the electricity for lighting and other purposes, and he could use the same point for heating as well as lighting. It must be remembered that the graduation between the steps in the scale of house measurements, and their related fixed charges, were to be decided by the supply authority according to its own local circumstances of supply and demand relatively to competing fuels.

The Committee also voiced an opinion, which is expressed repeatedly elsewhere, that there ought to be a greater simplicity in tariffs. They observe how consumers are puzzled by their local methods of charge compared with those in other places, and they remark on the necessity, from the standpoint of salesmanship, of not arousing a feeling in the consumer that he is somehow being made the subject of underhand or monopolistic tricks.

But they stated definitely that *no multipart tariff has as yet been devised or suggested to them which was suitable as a compulsory method for all undertakings*, unless coupled with an option to the consumer to be charged on the flat rate. Though, no doubt, this judgment applies much more forcibly to companies than to local authorities for reasons we have already discussed, an undertaking, even in the hands of a local authority, is a monopoly, and can thus arouse suspicion of undue preferences where preferences are allowed. Moreover, the economic stratification of Councils and Committees may provide real cause for such suspicion. Since there is no competition from other electricity supplies in the area, there must be maintained a competitive choice by the consumer, who is allowed to keep his hand on the safety-valve in the form of an option for a flat rate. The Committee recommended that the law should be amended to permit a local authority to establish a multi-part tariff with a flat-rate option; and even that the authority should be compelled to offer the multi-part tariff as an alternative to the flat rate. One of the great drawbacks to a two-part tariff is the difficulty of inducing poor people to save to pay the quarterly charge. In St. Helens, for instance, where 18,000 out of 24,000 ratepayers are assessed at £13 or less, it was found beneficial to charge 2s. per week for the hire of cooker and wash-boiler and twenty-four units, and 1d. each for units beyond twenty-four. This system displaced a tariff of 10 per cent on rateable value and ½d. per unit.

We are obliged to deal with the other recommendations concerning other kinds of supply more summarily now that the main principle concerning the charges for domestic supplies has been expounded. For business and office premises, the Committee recommended a two-part system with a fixed charge based upon the kilowatts demanded as ascertained by an indicator, or by the number of watts installed, plus a charge per unit for supplies at the same rate as for dwelling-houses. For small industrial power supplies, the installed demand is taken as the basis for the fixed charge, at a fairly high rate for an initial number of units consumed per kilowatt or horse-power installed, and then there is a lower rate per unit for all additional quantities consumed, common to that operating with the domestic multi-part tariffs. The formation of tariffs for other kinds of light, heat, and power were left to the discretion of the local authorities.

It will have been observed that the Committee did not recommend that local authorities should be *compelled* to use the house-area basis. In fact, although a survey made four years after the recommendations showed an increase in the number applying a two-part tariff for domestic supplies, the vast majority of local authorities still retain their rateable value basis. Thus, by March 1934, 300 out of 373 local authorities were supplying electricity under a two-part tariff; but about 200 were using the rateable value and only 100 were using the other as suggested by the Committee. The Electricity Commissioners in their Annual Report for 1934 deplored the great multiplicity of tariffs in force throughout the country.

A well-known expert has said of these tariffs:

> "All the various systems—rateable value, floor space, number of rooms, and so on—seem to work out in very much the same fashion, and one is reminded of the remark made many years ago by Mr. Trotter, formerly of the Board of Trade, to the effect that it did not matter whether the basis chosen was the cube root of the consumer's waistcoat buttons, so long as some fixed charge was established."[1]

This view, of course, stresses the need for getting a contribution towards the cost of plant[2] or electricity bought in bulk, but it does not emphasize the other side of the problem which faces local authorities, to attract more consumers and make each of them consume more.

We have already suggested that there are difficulties in the application of the smooth formulae of electricity charges laid down in the law and the recommendations of expert Committees. A closer consideration of these is instructive.

A municipal electricity undertaking is concerned about four things: (*a*) it must recover its costs; (*b*) it wants to reduce prices as (*c*) it wants to increase consumption which will in turn secure (*b*), and

[1] *Municipal Review*, 1934, p. 70, Electricity Notes.

[2] For an indication of this cost, cf. p. 426.

(*d*) it must treat its customers without undue preference. In practice, these are extremely difficult to combine.

In the first place, where two-part tariffs are in question, the use of a general standard like rateable value or floor space must result in much unfairness, some consumers getting an advantage, others being at a disadvantage. The alternative to such a general standard is the measurement of individual consumption followed by an imputation of cost. In the simple case of lighting a single meter is satisfactory as regards amount consumed, but not entirely so as regards the actual point of time of the demand. Where power is consumed there is a further complication, necessitating two meters for accuracy—but the cost often forbids the installation of two meters. Hence, the authority proceeds on estimates. If the fixed charge is to be just, it should be continually readjusted in the light of meter readings. But this involves heavy expense for clerical staff, as can be imagined where the consumers run into tens of thousands.

The consumer must in the first place be offered a price. This can only occur on the basis of estimates of total costs assuming a number of consumers and a number of units sold, and a "normal" basis of charge relating cost per unit to presumed consumption per house. This "normal" must be remunerative. It cannot be an absolutely fixed figure, but must allow for "normal" variations above and below a "normal" line, unless the undertaking is to be responsible for continually making small adjustments in charge—a costly business. Then, further difficulties crop up, the giving of inducements to consumption in the form of cheaper rates to large consumers. The steps are arbitrary; and unfairness may easily arise where prices are designed to increase demand at some time of the day and decrease it at peak periods, and vary it according to season. When the word "arbitrary" is used, it does not mean "without justice," but that justice can only be the result of trial and error, and in the course of such a process there is bound to be error.

All this, however, is child's play to the difficulties when power is used for domestic appliances. The charges must be fixed on an estimate of consumption, but consumption is not a simple term to the manager of an undertaking. He must watch for the point of maximum demand, to discover the responsibility which each consumer thrusts on the undertaking. An expensive meter can do this. But this would not be enough. Another meter would be required to show at what time in the day and at what time in the year the maximum demand comes. And so, not for one consumer only, but for all consumers, in order to determine the time of the collective maximum. But this is commercially impossible. Therefore, estimates based on sampling, experience of the demand of various pieces of domestic apparatus, and information from electrical contractors, must be used. This is exceedingly precarious—the forecasting the uses of not merely each individual piece of apparatus, cookers, heaters, washers, driers, geysers, fans, medical apparatus, but the probability of their simultaneous use. Though local authorities require, as part of their contract to supply, that all additional apparatus be notified, this is rarely obeyed. What hopes, then, are there if sales are to be pushed, of meticulous justice between consumer and consumer?[1]

The individual consumer cannot be watched closely enough for fairness to other consumers, or to the undertaking as a whole. Abnormal demands may be made upsetting the manager's calculation of the probabilities. In a remarkably interesting case,[2] it was stated in evidence that the maximum demand on the undertaking was until within two weeks of the testing date 25,000 kw, but on the fatal day, December 21, 1938, it rose to 39,400 kw. This addition cost the Corporation about £24,000, since it paid for its bulk supply on the basis of twice the maximum demand recorded in any one half-hour during the year multiplied by each day back to the previous January. Hence, the temptation to make adjustments for "abnormal" demand, sometimes by secret action, and if (though the happening is very rare), such secret adjustments are made, they deprive the consumers of the first step towards redress, publicity of principle, and make possible, even by inadvertence, undue preference. Judge Simonds, in his judgment in the case referred to earlier, declared:

> "And it is in fact much to be deprecated that any local authority undertaker should endeavour, as the defendants have done, to conceal the basis and method of charge. Adjustments of an arbitrary nature are in any case to be avoided. When the further claim is made to make such adjustments behind a screen, and information properly sought is denied, the way is paved to suspicion and discontent. Nor are they without justification. I am content to assume that the existing and gross anomalies, which, as the result of this action being brought, were brought to light and put an end to, were due to carelessness in administration.

---

[1] This reflection has a bearing on the issue of the payment to managers of a bonus on sales. The zeal to sell is disproportionately encouraged. Also, a manager might sting those consumers who cannot substitute other forms of power for electricity, while letting those who can off easily. This issue was not raised, but, perhaps, might fruitfully have been raised in the case cited in footnote 2.

[2] *Attorney-General* v. *Wimbledon*, T.L.R., vol. 56, December 22, 1939.

> But it wants little knowledge of public or local administration to appreciate that the exercise of such a power in secret might lead to grave abuse."

Thus, pricing which seems to be a piece of pure logic, capable of being put into a mathematical formula, resolves itself into an empirical approximation, made up of a number of conjectural factors and competing aims. How much depends upon the manager and the clerical staff's vigilance and integrity may be surmised. It happens here and there, that, protected by monopoly powers, and able to obscure the facts in technical jargon, some local authorities have not energetically enough fulfilled their responsibilities of measuring and re-measuring the comparative charges of their numerous customers.

How a large and capable local authority actually copes with the problem of both improving its load curve and of raising the total capacity and lowering the costs may be seen realistically from the tariff of Stoke-on-Trent.[1]

> "(1) *For Domestic Supply.*—The supply for lighting, heating, cooking and labour-saving appliances in private dwelling house is given for a minimum period of one year under formal agreement. There is (*a*) a multi-part tariff dependent upon a minimum fixed charge of two guineas a year for the floor area of the premises of 600 sq. ft. or less and then a consumption charge of ⅜ of a 1d. per unit or (*b*) an all-in tariff of a 1d. per unit for all purposes, and this is subject to the consumer taking supply by prepayment meter and agreeing to use an electric cooker and to consume a minimum of 24 units a week for all supplies.
>
> (2) *For Business Premises.*—A supply for lighting, heating and power in commercial and industrial premises for a minimum period of a year, subject to the premises being electrically lighted throughout at a fixed charge of £10 per kilowatt per annum of lamps installed payable in four equal quarterly instalments with a minimum fixed charge of 12s. 6d. a quarter and a consumption charge of three-farthings for all units consumed. Electrical contractors' showroom supply: Three-farthings per unit, subject to a minimum annual consumption by agreement.
>
> (3) *Ordinary Tariffs:*
>
> (*a*) *Long hour Lighting.*—Commercial and industrial premises for minimum period of one year and where rest of lighting pays ordinary rate of 3½d., 6d. per unit for first hour's use per day of the maximum demanded supply in the quarter and 1d. for all units in excess of this.
>
> (*b*) *Lighting.*—Quarterly account by ordinary meter, 3½d. per unit. A quantity discount is allowed on quarterly account exceeding £10 in total amount, for any one premises supplied,

---

[1] Slightly reduced from the official leaflet and special leaflets for the special tariffs.

at the rate of 1 per cent for each £10 of the gross account up to a total of £100 per quarter, and above that sum at the rate of 1 per cent for each further £25 of the account, up to a maximum of 50 per cent quantity discount.

(*c*) *Lighting.*—Prepayment or slot meter, 4½ per unit.

(*d*) *Late Shop Window Lighting.*—1¼d. per unit, subject to consumer providing time-switch and separate wiring, and lighting lamps in shop windows for not less than three hours each evening for five evenings weekly throughout the period of the year when the Summer Time Act is not in force.[1]

(*e*) *Floodlighting.*—Supply for the Exterior Floodlighting of Buildings 1¼d. per unit, subject to the consumer providing and maintaining the necessary separate wiring and time-switch restricting the use of the supply to the period between 6 p.m. and sunrise the following day.

(*f*) *Public Clocks.*—1¼d. per unit for supply to public clocks on places of public worship and municipal buildings, where the clocks are lighted from sunset to sunrise and subject to the cost of fittings and wiring being paid for by the consumers.

(*g*) *Places of Public Worship.*—2¼d. per unit.

(*h*) *Restricted Hour Supply.*—A restricted hour supply is one given only between specified hours. Electrical energy will be supplied from 10 p.m. to sunset the next day at 2d. per unit, provided the energy is taken through a time switch cutting off the supply entirely during other hours.

(*i*) *Electric Vehicle Charging.*—Non-peak hours 1d. per unit. Restricted hours ½d. subject to control by time-switch and between 8 p.m. and 8 a.m.[2]

(*j*) 1d. per unit when taken on separate circuit, including *refrigerators* and 1½d. per unit for *small intermittent supplies* subject to application in writing and agreement to accept the estimate of the Electrical Engineer of the quarterly lighting consumption then if all on one circuit, units in excess of estimated lighting consumption will be charged at 1½d. per unit. This allowance not to exceed 20 units per quarter The estimates of quarterly lighting allowance must be revised if the number or size of lamps is altered.

(*k*) *Heating and Cooking.*—By prepayment or slot meter, 1¼d. per unit where taken on a separate circuit and metered independently.

(*l*) *Electric Baking Ovens.*—⅝ of a 1d. per unit for supply to large commercial baking ovens, or ½d. per unit subject to supply being cut off from 4 to 6 p.m. daily and also to provision of time-switch.[3]

(*m*) *Commercial Electric Cooking.*—When on separate circuit, 1d. for the first 1,000 units per quarter, decreasing for each subsequent step of 1,000 units and at a fixed rate of 0·5d. for all units over 5,000 per quarter.

---

[1] Notice the seasonal discrimination.

[2] Notice the non-peak restriction.

[3] Notice the importance of this load—it comes at hours, *often at night*, when the plant is in little use.

(*n*) *Tubular Space Heating and Water Heating.*—½d. per unit subject to thermostatic control.

(*o*) *Off Peak Thermal Storage Heating.*—¼d. per unit between the hours of 8 p.m. one day and 8 a.m. the following day where the consumer supplies the time-switch to be set by the Department cutting off the supply entirely during the remainder of the day.

(4) *For Electric Motive Power.*—2d. per unit up to, and 1d. per unit for units in excess of 240 units per quarter.

(*b*) 20s. per kilo-volt-ampere per quarter demand charge, plus ½d. per unit for units consumed.

A quantity discount is allowed on quarterly accounts exceeding £10 with a maximum of 50 per cent; 1 per cent for each £10 up to £100, 1 per cent for each £20 from £100 to £200, and 1 per cent for each £50 of the account above £200.

(*c*) Consumers taking supply at extra high tension, or exceptionally large quantities on one works, or having exceptionally high load factors will be supplied by agreement depending on guaranteed minimum consumption, voltage, etc."

It should be observed that after the adoption of a successful tariff many authorities achieve considerable development of their business, and this permits and is usually followed by an alternative in the fixed and variable charges of the tariff.

In the previous chapter we made some observations on the charges for gas by municipal undertakings to other municipal departments; the matter of most importance was the supply for public lighting. In the case of electricity the matter is of more importance because supplies are needed for traction purposes, tramways and trolley-buses, as well as for public lighting. The cost of electricity to a tramway system is, in proportion to total costs, as shown in the table on p. 344.

The answers to my own questionnaire on this subject were extremely interesting because, apart from a few authorities who declared they were supplying at *above* cost of production for public lighting, almost all claimed they were treating the tramways and buses "as other consumers in similar circumstances" or giving them "similar terms to large private consumers." Here and there a "special low rate" for trolleys or trams was acknowledged, though they did not say it was less than cost, and here and there it was acknowledged that the Electricity Department thought it could not reduce the cost fairly to itself, but the Transport Department thought it was being robbed. There is, indeed, a great variety of method of arriving at the change. A formula is in use, being a two-part formula usually—but this means that all the difficulties and differences of calculation of maximum demand, or load factor, or share of capital cost arise in an acute form. It is not our business to decide who is right. It is enough to say, first, that the legal rule regarding no preference in favour of *this* particular consumer applies as it does to other consumers; secondly, that no fully satisfactory formula is likely ever to be devised; and thirdly, that even with the same formula calculations between different municipalities (and also within them, among the Treasurer and the departments in question) show differences. The student of the statistics of municipal "efficiency" must bear this in mind. A hidden subsidy or levy is easiest here.

MUNICIPAL ELECTRICITY UNDERTAKINGS

SALES FOR PUBLIC LIGHTING AND TRACTION COMPARED WITH TOTAL RECEIPTS

CERTAIN LEADING AUTHORITIES, 1935–36

Authority	Total revenue from working	Sales for public lighting		Sales for public traction	
			Percentage of total revenue		Percentage of total revenue
	£	£		£	
Birmingham ..	2,632,524	7,795	0·3	135,301	5·1
Manchester ..	2,077,245	29,761	1·4	139,995	6·7
Liverpool ..	1,938,092	28,269	1·5	203,438	10·5
Leeds	968,389	5,823	0·6	59,563	6·2
Nottingham ..	734,801	8,449	1·2	37,687	5·1
Bradford ..	663,592	9,271	1·4	67,339	10·1
Leicester ..	634,187	8,820	1·4	24,713	3·9

SOURCE: Annual Report of the Electricity Commissioner.

PUBLIC LIGHTING BY ELECTRICITY

Year	Units sold (millions)	Revenue	Average revenue per unit
		£	d.
1922–23	58·6	599,200	2·45
1925–26	89·7	731,283	1·96
1928–29	127·8	898,256	1·69
1931–32	182·8	1,134,493	1·49
1934–35	243·4	1,276,285	1·26
1937–38	341·1	1,510,717	1·06

SOURCE: Annual Report of the Electricity Commissioners.

An extremely interesting discussion of the problem occurred in

1932 at the Annual Convention of the M.T.T.A. It was observed that the Act of 1926, by limiting the rate in aid from electricity had reduced the impulse towards high charges for traction. Since 1911 a formula of charge had been in existence, but less than 25 per cent of the undertakings had applied it. It was thought alternatively that "lower than the industrial rate," "better than the usual flat rate," and on "bulk" supply terms, "cost of production" were the fairest basis of charge, but that, in fact, transport was being charged more than "cost of production." There was certainly a tendency to offer low charges because the transport undertaking was the largest single consumer in the neighbourhood, its load continued at times in the evening when industry was closed; and it was necessary to outbid the price of petrol for motor-buses. It was then thought that 0·75d. per unit was right.

MUNICIPAL TRAMWAY AND TROLLEY-BUS SERVICES

THE COST OF ELECTRIC CURRENT AND RATE-AID FOR CERTAIN TOWNS, 1937–38

Corporation	Electricity consumed (units)	Price paid	Average price per unit	Difference which would be caused in price paid by a change in the average price per unit of 0·1d.	Actual net rate-aid or deficit
		£	d.	£	£
Birmingham ..	46,455,437	142,970	0·74	19,300	10,000 (Aid)
Liverpool* ..	62,882,646	221,343	0·84	26,200	—
Southend ..	4,812,498	15,899	0·79	2,000	4,923 (Def.)
Hull	5,719,168	14,987	0·63	2,400	—
Doncaster† ..	2,818,965	8,222	0·70	1,200	4,000 (Aid)
Newport (Mon.)*	702,087	1,634	0·56	290	1,903 (Def.)

* No trolley-bus undertaking. † No tramway undertaking.

SOURCE: Returns relating to Tramways and Light Railways.

WIRING AND APPARATUS

It should be remembered that an important adjunct of electricity supply is the provision and letting on hire electric wiring, fittings, and apparatus. Also since the Act of 1926, local authorities have the power to sell these things outright and to install, connect, repair, maintain, and remove the same at prices and rents agreed upon. There is a proviso of importance from the standpoint of the cheapening of various appliances and wiring, in that the prices charged by local authorities for the sale of any electrical fittings must not be less than the recognized retail prices. Up to July 1930, 222 local authorities out of 373 were offering assisted wiring; 152 the hire of apparatus, 206 the hire-purchase of apparatus. The local authorities not offering facilities of this kind were deterred by the expenditure they would have to undertake, and, on enquiry, answered that existing or potential consumers had not demanded assisted wiring. This answer can only be interpreted as a lack of business enterprise. (A partial explanation is the hostility of the small tradesmen group on the local Council.) In fact, where similar answers in the past have been returned, some stimulus has resulted in the opening of a showroom and a house-to-house canvass. The local authorities have been well rewarded by the business opened up. When one realizes that the introduction of electric wiring into a house renders the competitive fuels and light less menacing, and that extensions of wiring counteract the sudden falling off in demand for electricity, the importance of pushing ahead with assisted wiring is unquestionable. Of course, local authorities must make a capital outlay, and the nstalments come in slowly and must be collected and there are occasional defaults. But all this is a necessary part of business enterprise.

Some local authorities work with local contractors, laying down general specifications of the work to be done, the fair wages clause, and the guaranteeing of the quality of the work for twelve months. It is to the interest of the contractors who are not over-fond of municipal enterprise to co-operate and canvass for business. An example will show what can be done. In 1936 Barry Urban District Council engaged local contractors to carry out wiring on request. Five lighting points were put in at a cost of £5, payable by deposit of £1 and eight quarterly instalments. Or, in addition, a power point was installed at £7, at a cost of £1 down and twelve quarterly payments. Beyond that arrangements could only be made between contractors and consumers. Other local authorities employ their own wiring assistants. Barnes makes a weekly charge of 6d. for wiring.

As to apparatus, there is a marked preference among local authorities to sell by hire-purchase rather than merely to hire it out, although they would rather do the latter than nothing at all as a means of securing business. Where the local authority only hires apparatus to its consumers, these may become capricious at any time and throw the article back on the hands of the undertaking, and if for any reason disgruntled, may even discontinue the consumption of electricity. There is a temptation on the part of some consumers to switch to and fro between gas and electricity. This is regarded as a "nuisance," and leads to some collaboration between the Gas and Electricity Departments, usually *after* they have had their fingers burnt. Where apparatus goes out on hire-purchase, it ultimately belongs to the buyer, and even in the intermediate period he is thereby much more attached to the apparatus and the supply of current for it. A Committee appointed by the Electricity Commissioners of 1930 to enquire into this subject[1] recommended that the heavy apparatus like cookers, water-heaters, electric fires, and wash-boilers, should be available either for hire or hire-purchase, but that the lighter articles should be available on hire-purchase only. Whether as a result of the Committee's recommendations, or by the natural evolution of the undertakings under competition, the number of authorities offering facilities increased by March 31, 1934, to 314 for assisted wiring, 268 for the hire of apparatus, and 271 for hire-purchase. There are many variations of approach to the consumers by the local undertakings. Some instances will show this variety of enterprise. In 1935 Poplar Borough Council arranged to supply *free* an electric cooker and to install and maintain it free of charge, and to give an aluminium kettle free, if electricity were taken at 1d. per unit; or, to supply the cooker on hire at 3s. 6d. per month and then charge only ½d. per unit.

PRICES IN RURAL AREAS

We indicated in our discussion of the area of supply of electricity that there was a great difficulty in extending the supply at acceptable prices to the rural areas, owing to the low average density of the population. We are far from wishing to give the impression that all rural areas are of the same character. They are of as great a diversity in their residential and occupational character as are the towns. The long distances which must be traversed, partly by underground cable but more, on account of price, by overhead lines, cause an enormous rise in distribution costs.[2] Whereas a mile of cable in an urban area may supply from two to three hundred consumers, the figure for rural areas is likely to be from ten to thirty. It is true that once the cables are taken out there is the chance of an accretion of consumers stimulated by the existence of supply. But it is a risk;

---

[1] Report 1930, No. 55/154.

[2] The procedure for obtaining and assessing the value of wayleaves is amply explained and examined in the *Committee on Ministers' Powers, Minutes of Evidence*, vol. ii, 1932, pp. 267 ff. Memorandum and Evidence of Sir Cyril Hurcomb.

and therefore before undertakings embark their capital they are not inclined entirely to waive the 20 per cent guarantee on their capital expenditure on the cable and cost of laying it which the law allows. Some, however, estimating the risk, do make some reduction on this. Local authorities, which means in this context urban areas, stand to lose by the extension of their service to the rural areas. Some charge additions on their city prices to the outlying areas. Large municipalities sometimes offer the same prices. For a service which will satisfy modern standards of lighting, cooking, heating, and power, for the home, the farm, and for agricultural purposes, new devices of price and area would have to be adopted. The essential factor in the situation is the re-grouping of the areas of supply. Where a local authority is thoroughly urban in character like Manchester, Birmingham, Bolton, Leeds, it is very difficult for the councillors, and indeed for the whole community, to regard itself as under any obligation to the surrounding countryside. It must always be remembered that the tradition, the law, daily interests, the obligation to meet losses out of rates, concentrate the interest of councillors upon their own district. Even the urban electricity companies show no great enthusiasm for the rural market. Therefore the full answer to this problem can only be given when a trans-urban area has been devised and either accepted or imposed. There are, of course, various market towns which have a double character, urban and rural, and where the equipment of the farm is made or repaired, where grain and cattle are sold and the banks depend upon rural customers. And these can do something in supplying the countryside. Two such towns, Bedford and Norwich, have been made the subject of demonstration schemes.[1] The first began in 1929, the second in 1930; the former covers 109 square miles, with a density of 176 people per square mile; the latter covers 125 square miles, with a density of 112 people to the square mile. The schemes still show deficits, but the experiments are certainly necessary.

Such schemes as these are based on the underlying principle, that there ought to be an approach towards equal opportunity of enjoying the benefits of national resources and technical development fostered by the public authorities by all areas in the country. There are limits to this principle, where the expense is felt to be prohibitive. We have already drawn attention to this price-tendency, which reposes in notions of social solidarity. This notion is most strongly entertained, of course, by the Labour Party and its supporters. It is apposite here to note the arguments as they appear in the Memorandum on the McGowan Report presented to the Trade Union Congress of 1936. (Report, page 218.)

---

[1] Cf. Annual Reports, Electricity Commissioners.

> "For this implied policy of charging similar or comparable prices throughout large regions, which should apply to both town and country alike, there appears to be as strong a case as for the now generally accepted policy of the regional standard charges for bulk supply from the Grid.
>
> A rough but valid comparison can be made with the Post Office. If the collection and delivery of letters were organized on the basis of Local Government areas instead of nationally, a much higher charge would have to be made for the service in sparsely-populated areas, or in very poor areas where letter-writing was not so prevalent as in commercial or prosperous districts. The fact that charges were higher in some areas, would itself discourage letter-writing there; while there would be a limit to any reduction of postal rates in these areas, owing to the rather inelastic overheads and maintenance charges which must be met, and to the impossibility of developing the traffic beyond a moderate point. As it is, everybody, whether living in a town of great population or in a distant rural parish, pays the same rates for inland postage; and it is sound business for the Post Office and the consumer that this should be so.
>
> It is possible to pursue this argument in much more detail and to quote many successful examples of a flat-rate type of charge. The chief point to be decided is whether or not electricity is the kind of service to which the principle should apply. In relation to universal availability and use of electricity envisaged, it is considered that the aim should be to charge similar prices for similar classes of supply. This may not be immediately practicable, but it should be the ultimate general aim. And if the existing price differences are to be ruled out, even if by stages, it will have to be tackled regionally under central direction."

Evidently, serious problems of the location of industry, and population, and many other local government services would be involved in such a price policy.

The general effect on electricity charges of the operations of the Central Electricity Board requires some consideration. We have already explained the work of the Board in dividing the country into eight areas, each of which is regarded as a unit for the production of electricity under the rule of the Board. The Board, besides arranging for transmission, and selecting the stations which are to continue to generate, and the establishing of the transmission lines, establishes a tariff for each area—popularly known as the "Grid Tariff." Those undertakings which do not own stations which have been "selected" buy from the Grid at the tariff fixed by the

Central Electricity Board for that region. But undertakings cannot be forced to take their supplies from the Grid unless it can be proved that it will cost the undertaking less, over a period of seven years, than the prime costs of independent production, excluding capital charges. Secondly, if the undertaking runs a "selected" station, it comes under the full direction of the Board as regards quantity and rates of output, times of output, and with due regard to economy and efficiency; and must sell to the Board all its electricity at the cost of production.[1] The rules for establishing the cost of production are carefully formulated in the Second Schedule to the Act of 1926.[2] The undertaking is obliged to buy back from the Board the amount it requires on one of three principles. The first is the Grid Tariff. The second is the cost at which the undertaking produces, modified for differences between owner's own load and power factors and the better load and power factors obtained at his station under grid operation, plus an amount for the share of the Board's expenses. The third is the estimated cost of generation if the undertaking had remained an independent producer for itself, that is, not taking into account[3] improvements of load and power arising out of production for the Central Electricity Board.

Hence the undertakings with selected stations are safeguarded against being worse off than they might have been without the Grid. The general effect of the Grid system is, therefore, to bring down the cost of electricity to the undertakings with formerly inefficient (and therefore non-selected and closed down) stations, and to hold down the cost of electricity to what it was before for the undertakings with the selected stations. If it has not been of advantage to the latter, it has not been to their disadvantage, and they have been harnessed in a system which causes the benefits of efficient stations in the form of their "exports" of cheaper electricity to be passed on. The Grid Tariff is of the two-part type being an annual charge per kilowatt of maximum demand and then a charge per unit. To these basic charges three correctives have been added: for special electrical characteristics of power, for variation in the price of coal measured from the base assumed in the tariff as originally established, and for local rates paid by the undertakings in the stations. The kilowatt charge per year is of the "step" type designed to encourage sales and to reward the undertakings which in the past had developed their load beyond others. A few non-selected stations are still of value to the Grid because their works cost *without capital charges* are lower than the Grid or Tariff. The Board supplies the undertaker with electricity; but its plant is used under the direction of the Board for peak-load and standby purposes, and he receives a rental from the Board for this use. At a certain point the plant must be shut down.

---

[1] Section 7, Electricity (Supply) Act, 1926.

[2] A Monthly Cost of Production Return (C.E.B. Form O.R. (3)) has to be made out. It is based on the analysis of cost in the Schedule.

[3] Section 13.

It is noteworthy that most of the "selected" undertakings, private as well as municipal, have taken advantage of Section 13. The method of calculating sales to and purchases from the Board results in the "export" stations being paid for their "exports" plus the cost of the additional fuel, oil, and water, and repairs to reclaim plant other than electrical. There is an undercurrent of grievance that their plant "is being used on a large scale at their cost, to afford supplies *via* the Grid to other undertakings at cost which the latter could not secure for themselves."[1] Moreover, there is difficulty in determining the hypothetical independent working cost of undertakings, and an enormous amount of labour is involved in the necessary computations. It appears that the companies have protested more vigorously than the municipal undertakings about this situation, although the latter subserve the Grid to a considerably greater extent than the former. The situation is due to a not well-founded hope in 1926 that the sales of electricity would proceed at such a rapid rate that that "selected" stations would have benefited from adopting the second principle (the Adjusted Stations Costs) of charge—that is, cost of generation, corrected for load factor, plus a share of the Board's expenses.

Nevertheless the benefits of the Grid in terms of price to all the other stations, and to the "selected" stations in terms of saving on reserve plant are considerable. The Central Electricity Board's Report for 1938 contains a diagram (No. 2) and figures showing a fall of 22 per cent in the average inclusive cost of generation per unit since 1932. This, of course, is due not merely to interconnected working, but to the coming into operation of modern plant installed by the "selected" undertakings by arrangement with the Board. When the contributions to the expenses of the Central Electricity Board are allowed for, there is still a national average reduction of 17 per cent in the costs of production per unit.

---

[1] Cf. *Some Aspects of Municipal Electricity Supply Finance*, by W. E. Foden, A.S.A.A., formerly Financial Controller, Electricity Department, Manchester I.M.T.A. Report, *Proceedings*, June 17, 1937, p. 135.

Chapter Nineteen

TRANSPORT CHARGES

FIXED costs play a remarkably large part in the establishment of fares for municipal transport systems.[1] The major preoccupation of transport managers and committees is therefore to utilize their lines and rolling stock to the largest possible extent. There is also continued public pressure on them to reduce the fares. As has been demonstrated during transport strikes, the demand for transport is very elastic, especially on short journeys, since there is the competition of bicycle and walking. Closely connected with the problem of what to charge is that of the frequency of the service. The manager does not want to spend his money on electricity or petrol or minor repairs which are dependent on the actual number of journeys run, unless he can fill each vehicle to a reasonable proportion of its capacity.

We have already emphasized the problem of the peak load in other utilities; it is more troublesome and insistent in transport than even electricity. Therefore the undertaking has to find a compromise between what it would like to charge and the fares charged by rival services; and further, must make an arrangement satisfying both the passenger's longing for a continuous belt of moving vehicles responsive in continuity and speed to his own individual needs, and the problem of getting the capacity of the vehicle paid for. Further, the ideal method of charge would be measurement of the minutest fractions actually travelled. But this would not be compatible with easy administration, and therefore recourse is had to general calculations by miles and to charges by *stages*. There is constant pressure both from the standpoint of simple administration and the philanthropic-cum-social-justice motive towards a uniform fare regardless of the distance travelled. But, in practice, both for revenue-earning purposes, and also through the grumbling of those who habitually take only the shorter-stage journeys, the uniform fare system is only adopted in towns where the population is densely congregated in a small area. Generally, the municipal systems go by stages, which are marked by the economic and social topography of the town.

---

[1] Gledhill (Chairman of the Halifax Transport Committee), paper on "Relation of Capital Charges, etc., to Transport Costs," Annual Conference, Municipal Tramways and Transport Association, June 24, 1936. Cf. also table, p. 426.

It should be noticed that the Statutes and Orders giving power to the local authorities lay down a maximum fare. They are obliged to charge not more than a 1d. per mile, and not exceeding 1½d. for the first mile. Local authorities may charge anything below this that they like, and there is very much experimentation to discover the fare with fractions of 1d. and fractions of a mile which will give the most satisfactory revenue result, while satisfying the customer. The law establishes one other basis of charge. It requires special fares for workmen, without defining workmen.[1] This holds good of the tramways only; and consequently there is (except in the municipalities dominated by working-class population) a great temptation to abandon trams, and to substitute trolley-buses and motor-buses.

We are fortunate in having a survey of actual fares made by Mr. Charles A. Hopkins, General Manager of the Sunderland Corporation Tramways and Motors Department.[2] He shows, in forty-one tramway undertakings, nineteen trolley-bus undertakings, and seventy-six motor-bus undertakings, that the short distances with the 1d. and 1½d. fares are the backbone of the revenue, and that for trams they even cover 72 per cent of the tickets issued. Also the passenger travels, for a given sum, a smaller distance on trolley-buses than on motor-buses, and on motor-buses than on trams. Of all these undertakings, only four issue ordinary ½d. fares: three are in Scotland and the other is in Newcastle-on-Tyne, the topographical situation of which is such that a ½d. fare to the central railway station to the city shopping centre is a reasonable proposition.

As to workmen's fares, these are extensive and apply to trolley-buses and motor-buses also. This is not due to legal compulsion, but to the need to compete with the trams which are compelled by law to cut prices. There is a very great variety of basis of charge. For example, four charge half the ordinary fare; twelve, a single fare for the return journey; ten establish a minimum fare the amount of which varies among these authorities from 1s. to 3d.; one of them issues only tickets for twelve journeys; another discount tickets; another coupon tickets; one runs a special service; twenty-seven stipulate return on the day of issue, while nine allow return to be made at any time. We said that there is no legal definition of a workman. Originally, it was applied to the labourer, and its application was not dependent upon any proof of labour excepting the going to work at an unearthly hour. There is one authority at least, Maidstone, which requires the production of a National Health Insurance Card as proof when a pass is issued which entitles to a workman's ticket. In order to overcome the difficulty of definition, and to extend the facility to other citizens who are no less workmen, local authorities have gradually extended the time limit within which they will issue the cheap fare. For example, three issue tickets until 7 a.m.; nine until 7.45 a.m.; twenty-three until 8 a.m.; ten until 8.30 a.m. (when the black-coated workers begin); two until 8.45 a.m.; twenty-three until 9 a.m.; one until 10.30 a.m.; while two issue until any time, that is all fares are at the workmen's scale. (Some allow workmen's fares in the lunch hour.)

---

[1] An example may be taken from the Middlesbrough Corporation Act, 1919:

42.—(1) The Corporation at all times shall and they are hereby required to run upon the Corporation tramways a proper and sufficient service of carriages for artisans, mechanics and daily labourers each way every morning and every evening (Sundays, Christmas Day and Good Friday always excepted) at such hours not being later than eight in the morning or earlier than five in the evening respectively as may be most convenient for such workmen going to and returning from their work at fares not exceeding one halfpenny for every mile or fraction of that distance. Provided nevertheless that the Corporation shall not be required to take any fare less than one penny. On Saturdays the Corporation in lieu of running such carriages after five o'clock in the evening shall run the same at such hours between noon and two o'clock in the afternoon as may be most convenient for the said purposes.

[2] *Proceedings*, 25th Annual Conference, Municipal Tramways and Transport Association, 1935–36, pp. 123 et seq.

The issue of workman's tickets is a serious matter, since a large proportion of the revenue is obtained from them, and this heavy traffic is thus encouraged to ride at the peak-load time. Thus an investigation shows:

Number of undertakings	Kind	Maximum per cent revenue	Number with 10 per cent and over	Average per cent revenue
24	Tram	30·91	12	11·12
21	Trolley	43·7	11	11·1
48	Motor-bus	43	20	11·7

Vigorous controversy has occurred on the merits of such privilege tickets.[1] In particular, it is asked why, now that the remuneration of labour is superior to what it was in 1870, and is subject to legal protection, there should be fare subsidies; and also why industry should be encouraged to come to a town on the understanding that there will be cheap bus services from the housing district to the factories.

---

[1] Cf. C. Owen Silvers, *Growing Problem of Workmen's Fares*, and discussion at 1939 Conference, Municipal Passenger Transport Association.

Another device is the issue of universal fares, but only six undertakings issue these. One may go anywhere with them, at much reduced fares, but only at prescribed hours. No undertaking permits the issue of these tickets after nine in the morning, and the intention is obvious—to fill the trams and buses at a not too popular hour.

Other differences made are children's fares and special fares for scholars and students. There is, again, a great variation regarding the method of charge. Most authorities charge half the adult fare; two charge ½d. for any distance and five 1d., while some lay down a penny minimum. There is a variation regarding the age limit: some undertakings issue tickets up to the age of twelve; the large majority to fourteen; and some to fifteen and even sixteen; a few go above this. Some, of course, allow free travel under the age of three, four, and five. No doubt in the proper accountancy of the transport undertaking there ought to be debited to the Maternity and Child Welfare Department some at least of the amount conceded on fares of this kind. The grant of free travel to infants is not without opponents; the railway companies wish the age limit not to be five but three, and Mr. Hopkins himself supports them on the plea that "the average child over three years becomes of seat-occupying size and frequently does claim a seat to the exclusion of a full fare-paying passenger. And is it not correct to say that appreciable revenue is at stake? . . . The tendency to mulct Transport Undertakings in all sorts of privileges to various kinds of travellers is so well known that I believe any movement to extend free, or even half-fare, travelling ages should be fought. The ingenuity shown in the milching of Transport Undertakings is truly wonderful and should be devoted to a better cause."

As regards scholars and students, some undertakings give no facilities, while others vary extraordinarily in the facilities offered. For example, eleven issue special tickets, one of them charging an amount per year; seven issue scholars' passes either at a low cost or none; a very large number charge half the adult fare; some charge less than this, and two charge at a quarter the fare; then there is a great variety of age-limits from 15 to 21 and some have no age limit at all. In some undertakings the scholars produce their school badges for identification.

One of the problems of municipal transport administration is to discover a means of permitting people to travel with the least amount of difficulty over the whole system without taking new tickets and paying new fares, and for this to use alternative and supplementary methods, the trolley- or the motor-bus.

Of eighty-seven undertakings interrogated by Mr. Hopkins, fifty-six did not issue transfer tickets, while the others had an extraordinary variety of devices. Sixteen had general transfers; one limited it to trams; in all the other cases there was a limitation as between one bus and one tram route or between a specific connection between a local service and a neighbouring system; or as between certain points to the railway station, or where certain routes overlap; or the limitation was applied to workmen or students or buses run specially from theatres at the close of a performance, etc. The system is an unprofitable one. In the first place, general passengers do not usually travel their full distance for the unit charged, say 1d. per mile, and these constitute a profitable class of passengers for the undertaking. If those who want to go on further are allowed by the transfer system in other cars without extra payment, there must be a diminution of receipts. Further, there is a serious possibility of abuse. Mr. Hopkins says:

> "I can say without exaggeration that at least 75 per cent of our missed fare reports relate to transfer passengers overriding their stages. Prosecutions have failed to stop the evil. I would like to abolish the transfer forthwith. It is a fare that will defeat the most vigilant conductor."

At least two authorities date the ticket, and mark it according to the sex of the purchaser. The Coventry analysis showed that 12½ per cent of all complaints arose over transfer tickets.[1]

Most undertakings do not issue all-day tickets, and those who do vary as between the price they charge for adults and children and the hour at which they become available. They are usually arranged in order to feed the off-peak traffic. At Sunderland, this class of ticket is issued in order to get revenue from visitors to the nearby seaside resorts.

The large authorities have a system of season tickets which vary in a number of factors: according to distance; according to the length of time for which they are taken, whether weekly, monthly, three-monthly, or yearly; according to whether trams, trolleys, or buses are managed by the local authority; varying as to adult, child, scholar, or apprentice; as to particular routes or within particular Zones and, of course, as to the unit of return fare charged for ordinary rides; or limited to one competitive route. Of the eighty-seven undertakings interrogated, fifty-nine did not issue such contract tickets. In 1931 the local trade associations of Burnley asked for season tickets, to encourage more riding. It was shown that if the same numbers as before rode there would be a reduction of £10,000 a year in receipts.

---

[1] Mr. R. A. Fearnley, Manager and Engineer, p. 143, *Proceedings*, M.T.T.A., 1935–36.

Besides the issue of tickets to passengers of the kinds already discussed, many local authorities charge nothing at all for old-age pensioners or the blind. In the South-East Lancashire and Cheshire area, for example, free travelling facilities are granted to the blind on all services in six out of nine towns, two of the remaining three being restricted to trams, and the third being subject to payment of 10s. for a pass for insurance. Manchester, Oldham, Rochdale, Salford, and Stockport give similar facilities to ex-servicemen, in some cases stipulating the extent of their disability. In three cases, free travelling facilities are granted to all or certain members of the City Council.[1] In 1931 Hull City calculated that the concessions of old-age pensioners and disabled ex-servicemen cost about £15,000 a year.

HOUSING ESTATES

In the course of discussion of the area of transport, it was observed that the development of new housing estates on the outskirts of the great cities imposes upon local authorities a very serious burden. The population of the housing estate is usually homogeneous in character: it all travels at definite peak hours. Workers' or clerks' wives do not respond to offers of cheap fares at midday. The costs of transport are high regarded from the angle that the vehicles are in service for only two or three hours a day. Yet the population of a housing estate cannot afford high fares. Local authorities feel obliged to seek a form of transport, for example, the motor-bus, which will not involve them in the heavy capital costs of tramways and trolley-bus systems. The people who live in these estates are usually employed in industry and commerce centrally located and cannot afford the increase in their travelling expenses. Either, therefore, the people will not move out to the estates, or there must be a reduction in fares. Birmingham has had very special and important experience in this matter. Mr. A. C. Baker, the General Manager of the Tramway and Omnibus Department, gives some very interesting facts regarding the experience.[1] The maximum return fare was reduced from 7d. to 5d. over the whole of the system for passengers reaching their destination before 9 a.m. As some of the estates are 6½ miles from the centre of the city, these workman passengers could travel 13 miles for 5d. (whereas if we refer to thirty-three tramway undertakings as given by Mr. Hopkins, the average distance allowed by tramcar for 5d. is only just over 12 miles, for trolleys 8·75 miles, and for motor-buses 8·43 miles). This was a serious burden on the tramway undertaking. Mr. Baker further points out that during the peak-load periods, buses operate almost empty in one direction and therefore have to travel 26 miles to earn 300 pence, about 11½d. a mile, which does not cover even operating expenses. . . . Mr. Gledhill[2] suggests that Housing Committees should consult Transport Committees before selecting site for rehousing of slum clearance areas. This is desirable; but there is very little choice. In Sir Ernest Simon's book *How to Abolish the Slums*,[3] the author points out that it is a necessary part of the rehousing of the population on the outskirts of the town if that solution is preferred to centrally situated flats, to subsidize transport. Certainly it is either this, or the subsidization of rents to the point where transport could be bought at a price, say, equal to the cost of production. But if the rents were reduced on this basis, tenants, according to Mr. Baker, might not easily accept the argument that it was to meet the transport charges, and those who travel the longest distance to their work would feel that an undue preference was given to those who only travel a short distance. The problem is indeed serious.[4] A double-deck top-covered bus must earn an excess of receipts over service charges at least of £300 a year to cover capital charges. It can therefore be easily understood how expensive it is to provide vehicles costing £1,600 each to do only a few journeys morning and evening. This sum cannot be earned, and the mileage per bus per day is reduced over the whole fleet with a consequent increase in operating costs per bus-mile. Mr. Baker concludes: "In point of fact every additional vehicle put into service places the

---

[1] As a matter of fact, it would pay local authorities to make a lump-sum payment to the Tramway Department for free transit of certain officers whose time is valuable—e.g. gas-fitters, constables, etc. Edinburgh makes a lump-sum payment for transit of constables.

---

[1] Paper to Annual Conference Municipal Tramways and Transport Association, 1932, "Effect of Development of Housing Estates on Municipal Passenger Transport."

[2] Loc. cit., p. 10.

[3] 1929, pp. 55 and 70.

[4] Cf. also Pilcher, *Road Passenger Transport*, pp. 52 ff

Transport Department in a worse financial position. If I again refer to Birmingham, a very good example of this situation is afforded. At the present time, no less than 69 per cent of the rolling stock lies idle between the hours of 9.30 a.m. and 4.30 p.m., and this percentage is growing as the estates develop." Mr. Gledhill received the following replies to the question regarding comparative *revenues per hour* obtained by buses in certain towns:

	s.	d.
Normal Services:		
Town A	11	1
B	10	6
C	10	1
D	9	10½
City E. Normal Services	9	11
Housing Estate with partially built-up area between centre and estate	11	3½
Housing Estate, no intermediate traffic area	13	5½
City F. Normal Service	15	1
Housing Estate	13	5
City G. Normal Service	18	8
Housing Estate	13	2

He observes: "One City draws a higher revenue per hour on the Housing Estates Services. *This is due to the very low local fares and cheap tickets for school children.* Some housing estates are fully equipped with schools, and the school children's traffic is, therefore, negligible. Other housing estates are complete with cinemas and other attractions, and in consequence there is no evening load into the City for amusements. All these factors must be taken into consideration in relation to costs and revenues."

The extraordinary variety of local traffic circumstances, and the capital and running costs (the former partly depending on the variety of loan charges varying with the price of capital at the time the undertaking was commenced or extended or bought up, and the latter with the gradients of the locality) must cause a constant attempt to adjust earnings, and service to cost of production. Therefore there is an extraordinary variety of fares, and continual experimentation with routes and fares, which is a tribute to the remarkable resilience and experimental readiness of the local authorities, committees as well as managers. Some examples, which must necessarily be cursory, ought to be given of this experimental spirit. In 1930 the issue arose in Liverpool whether there should be workmen's tickets at a reduced return fare. It was argued in opposition to this that ordinary fares in Liverpool gave a ride of two miles for 1d. and up to seven miles for 2d. A questionnaire sent to other towns gave the answer that none gave as long a 1d. fare as Liverpool and only Glasgow gave more for 2d. (though it gave less for 1d.). Hence the proposal was rejected. The general financial position of the trams was not brilliant, either. In 1934 there was much discussion in Manchester, Birmingham, and Dundee on the giving of preferential fares, such as a cheap all-day ride, but it was realized that losses would result, and the authorities were faced with the alternative of raising the fares for short journeys. This they were not prepared to do. In Glasgow there was pressure for the establishment of season tickets. But the manager pointed out that the bus fares were the cheapest in the country, and that he would rather have a decrease in all fares above 2d. than undertake the season ticket system. He suggested that one might make an experiment with all-day tickets at 1s. each for Sundays to cover every form of transport in Glasgow, and for weekdays at 6d. unlimited travel after 5 p.m. (It might be noticed that the lowness of the bus fares in Glasgow is a result of the competition of the low tram fares, which are themselves due to the early provision of large amounts for the repayment of the outstanding debt.) There is much experimentation with the acceleration of services, it being realized that this will give more passenger miles without a corresponding increase in costs. From 1930 to 1932 Sunderland conducted the experiment of trams and buses along a given area in competition with each other, with the result that the route reverted to an all-tram route. In 1932 Newport (Mon.) put up the fares from 1d. to 1½d. and found a loss of one-third of the revenue, and, therefore, on consideration returned to the penny fares for a six months' experiment. In 1932 Bournemouth conducted an experiment of fifteen weeks in order to calculate the comparative cost of buses and other vehicles. In 1936 the gross revenue loss of £52,362 a year on the buses in Manchester prevented the project of a 6d. maximum return fare from being carried through. It was calculated that if the fares were lowered, the passengers would be attracted from the trams, which would make a loss, and therefore raise the question of their abandonment. Indeed, that abandonment is occurring. In the same year the Rawtenstall Town Council discussed the question of discount tickets, but decided that the better policy was not to offer special facilities of this kind, but to keep ordinary fares so low as to make exceptions unnecessary. In 1936, when the Birmingham Transport Department showed a profit of £185,442, there was pressure to reduce the workmen's fares from 5d. to 4d., in spite of the loss already occurring on the Housing Estate traffic when at 5d. The proposal was resisted with the argument that the profit was not really a free surplus but devoted to the purchase of buses out of revenue instead of out of loans, to cause a saving on loan charges.

It would seem impossible to make much difference to the number of people who travel and the length of the route they use by what may be called "salesmanship," but there are managers who believe in "merchandizing" passenger transportation. For example, Mr. A. A. Jackson, General Manager and Engineer of the St. Helens Corporation Transport Department, believes that the good will of the travelling public must be fostered and maintained by comfort, speed, and reliability. To do this he proposes smart designs; attractive colour schemes; neat interiors and adequate ventilation; frequent painting and maintenance; comfortable seats arranged transversely and the attractive lighting to which we have become accustomed at home; the maintaining of freshness and cleanliness by spraying with disinfectants possessing a refreshing odour; neat official uniforms, pleasant to the observer and comfortable to the wearer; carefully worked-out traffic schedules (for "there is possibly no more useful means of encouraging riders than that of having a vehicle in sight"); the location of stopping-places in suitable positions, and varied publicity.[1]

SERVICE

Side by side with experimentation with charges there is considerable experimentation with service. New designs to give more space, to provide better colour, more durable fabrics, better lighting, better ventilation, electric heating, and generally more comfortable riding, are watched with very great interest and utilized as soon as possible. The problem of loading and unloading speedily has been prosecuted with great vigour, and changes are made, though costly, as soon as new technique gives a stimulus thereto. Taking the country as a whole, the generalization holds good, although we do not deny that there are local authorities with most decrepit trams and here and there trolleys and buses, ugly to look at and unpleasant to ride in. Local authorities whose transport services run beyond the congested area into country or seaside districts have taken special trouble to introduce advertisement of excursions and booklets quite up to the standard of anything produced by private transport systems. Such a judgment cannot be demonstrated statistically: we have seen many samples of municipal and private firms' publicity material. We have (among many) before us one issued by the Wolverhampton Transport Department which is said to be issued "to encourage the use of the corporation buses and acquaint our people with the charm and beauty of the country surrounding Wolverhampton." What has in actual fact been produced is an extremely attractive guide-book on very good paper and with excellent photographs. It is partly paid for by advertisements of private firms, and the Borough Electrical and Gas Departments have advertisements included. There are many other municipalities which do the same thing. Indeed, so prevalent is advertisement that one begins to feel qualms. For where there is a monopoly it is possible at a certain point to waste money by such advertisement, but the point is determined by the extent to which the potential consumers have been induced to become actual consumers, and that can only be decided by cautious trial and error. When the demand reaches saturation point then, of course, from a strictly economic point of view, such advertisement will only be justifiable if it is the only way in which custom can be retained.

---

[1] Cf. *Tramways, Light Railways and Transport Association Journal,* May 1936, pp. 5822 ff.

"PROTECTED FARES"

Direct observation shows that municipal transport systems are enterprising and resilient. They have, of course, in recent years been strongly stimulated by the advent of the two new forms of transport, namely, the trolley vehicles and the motor-buses, the latter giving great competitive stimulus, because they are part only of the genus motor transport. Local authorities have not merely been stimulated by competition from this last, but some have actually been killed by it. Up to 1930 they protected themselves by their power to license public utility vehicles, and since 1930 they have been "protected" from bus competition by the Road Traffic Commissioners.[1] That protection, such as it is, has taken two forms: the protection of their fares and the prohibition of picking up and setting down the same passenger along a certain route or within a certain area.[1] Naturally in their decision the Commissioners have to consider the extent to which they shall not merely protect the tramways but also limit the enterprise of those who want to put buses on the roads. The inability of municipal authorities to foresee the advent of the new types of transport was an inability shared by almost everybody in the transport world. Some protection is therefore accorded to those who invested such large amounts of capital in the establishment of tramway systems on both humane and economic grounds. The economic difficulty is at one moment to discard a mass of still valuable capital. If it were possible to dismantle portions of the old and *pari passu* install and exploit the new, the problem would be less perplexing. Free enterprise is faced with this difficulty even as municipal enterprise; but it seems to be easier for the transition to occur from old to new methods and capital installations where instead of a strong sense of civic responsibility there is the adventurousness of private entrepreneurs. The difference of outlook and incentive is a difference between the municipal sense of trusteeship and the individual or joint-stock company's personal risk. They must and do result in different decisions.

---

[1] We have put "protected" in inverted commas because, in fact, many tramway systems remain still badly hit by the qualified competition allowed. Thus the Brighton Corporation were forced to abandon their trams in spite of the "protection"—the Corporation's Bill (1939) authorizing a joint service of trolleys and petrol buses with Tillings is based on the abandonment of the trams.

We cannot fail to see in the whole of the road traffic regulation the possibility of the dead hand on developments. That, however, in its larger aspects is a point which goes beyond the present subject. But it might be said that the Traffic Commissioners and Minister of Transport are not disposed to condone inefficiency on the part of the "protected" undertakings, or consider the claim to "protection" as the only consideration to take into account when judging a claim for a road licence. The relevant criteria in the Road Traffic Act of 1930 are (Section 72): "(*a*) the suitability of the routes on which a service may be provided under the licence; (*b*) the extent, if any, to which the needs of the proposed routes or any of them are already adequately secured; (*c*) the extent to which the proposed service is necessary or desirable in the public interest; (*d*) the needs of the area as a whole in relation to traffic (including the provision of adequate, suitable and efficient services, the elimination of unnecessary services and the provision of unremunerative services), and the co-ordination of all forms of passenger transport, including transport by rail." They must take into account the representations of persons already providing transport facilities and of any local authority in the vicinity of the routes. Further, where desirable in the public interest, the fares shall be so fixed as to prevent wasteful competition with alternative forms of transport, if any, along the route or any part thereof, or in proximity thereto. In interpreting these conditions the Traffic Commissioners and the Minister of Transport have allowed for the continuance in remunerative service of a municipal tramway and trolley system,[1] but denied that municipalities have a prescriptive right to such protection and asserted that there is a limit; have refused protection to tramways which in their opinion were inadequate for the traffic, even though a fuller service would have been unremunerative;[2] and denied protection on the ground that tramway losses were probably due to inefficient organization and not merely through competition by omnibuses.[3] The Commissioners take into account the fact that local authorities must provide services which may be unremunerative on some routes owing to the obligation regarding workmen's fares and minimum ordinary services arising out of social obligations, and therefore allow the fares in other cases to be higher in proportion in order to restore the financial balance.

---

[1] Cf. Chester, *Public Control of Road Passenger Transport*, pp. 119–38.

---

[1] *Birmingham and Midland Motor Bus Co., Ltd.,* re *Leicester Corporation,* R.V. 12454, October 1931.

[2] Manchester *re* Mayne & Co., R.V.A. 2487, January, 1934.

[3] Cf. Chester, *Public Control of Road Passenger Transport,* pp. 129–132.

Chapter Twenty

WATER RATES AND CHARGES

SUBSTANTIALLY, the costs of water supply are overhead costs;[1] but there are some distinguishable consumer costs directly dependent upon the special uses and apparatus required by each consumer. The outstanding element in the fixing of charges for water is the fact that public authorities have in several respects a strong sanitary interest in encouraging the largest possible consumption of water, and regard this as part of their public health administration. Consequently, they are little inclined to worry about load curve considerations. Indeed, these are less important because they must begin with a large reservoir of water, and that reservoir is made with a fairly good estimate of the quantities which will be used. Further, the amount actually spent per head on water is in this country small compared with gas, electricity, and transport, owing to the plentifulness of good water, and therefore there is a strong reason for not measuring the supply by an apparatus which, proportionately, would be a heavy charge.

TABLE

EXPENDITURE PER HEAD PER YEAR ON GAS, ELECTRICITY, TRANSPORT, AND WATER[2]

Gas	£1·5
Electricity	£1·8
Transport	£1·4
Water	£0·689

Though the uses of water may be very various its basic importance to health and life itself, and the fact that in the public mind it is regarded as a homogeneous commodity, makes the flat and uniform rate of charge extremely likely. Finally, there is a strong probability that from house to house the amount of water per person which will be consumed in the long run will be about the same. It can, therefore, be measured, for domestic purposes, largely by the size of the house. From this it is only a small logical step to charging by rateable value.[1] However, this general basis of water charges produces strange anomalies, as it is *not* based on the actual number of people in each house.

---

[1] The proportion is much greater in gravitation than in pumping schemes. Cf. Appendix, Capital Charges as Percentage of Total Costs.

[2] Computed from Statistical Abstract for years 1936 or 1936–37 for Gas, Electricity, Trams and Trolleys; Garcke's *Annual* for Motor Buses and Coaches; Water Supply from Ministry of Health Returns and evidence before Joint Select Committee on Water Resources.

Where local authorities act under the Public Health Acts there is no limitation upon the rates they may charge. Section 126 of the Public Health Act of 1936 merely stipulates that a water rate may be levied for domestic purposes assessed on the net annual value, that a minimum charge may be fixed in all cases, that reasonable additional charges may be made for baths in excess of fifty gallons, and hosepipes for washing horses or vehicles, and that the authority may enter into agreements for supplies by meter or otherwise. The limitation of charge, if any, comes on the one hand from the necessity of balancing their budget, which would mean the meeting of a deficiency on their water undertaking out of the rates, and on the other hand out of respect for the judgment in *Worcester Corporation* v. *Droitwich Union* (1876), which forbids profit-making by authorities supplying water under the Public Health Act of 1875.[2] Where local authorities act under private acts, the maximum charges for domestic supplies and those also for non-domestic supplies are prescribed, and these charges are calculated on the basis of keeping the undertaking financially balanced. The Public Health Act, 1936, provides that any ten ratepayers in a borough or urban district or five in a contributory place in a rural district may appeal to the Minister for a reduction of the charges. It should be remembered also that by the Water Undertakers (Modification of Charges) Act, 1921, twenty consumers may apply to the Ministry for a reduction of charges. The extent, however, to which local authorities regard themselves as responsible for a wholesome water supply on a not strictly economic basis can be seen from the fact that on a total annual income in 1937 of less than £19,000,000 local authorities had to raise £1,000,000 to meet deficiencies. (Of course, if the areas of water supply were more rationally reorganized, the deficiency might well be wiped out, or the total supply and even more provided at less than £19,000,000—a deficiency might still be a matter of policy on eleemosynary grounds or to stimulate industry and trade in various areas by a low cost of this raw material.) Some local authorities charge for water deliberately below cost; others, like Merthyr Tydfil, which planned its reservoir not dreaming that South Wales would suffer a catastrophe, find their consumers gone; and others, again, who have not deliberately adopted non-economic charges are, when faced with a deficit, not anxious to raise their charges.

---

[1] The one hundred and twenty-seven local authorities included in the *British Waterworks Directory* for 1936 charge as follows: 0·8 per cent rack rent, 2·5 per cent annual value, 2·5 per cent gross annual value, 5·7 per cent rateable value, 8·0 per cent gross value, 10·3 per cent gross estimated value, 70·2 per cent net annual value. The Public Health Act, 1936, stipulates net annual value according to the valuation list in force at the beginning of the rating year. This sometimes has amazing results. For example, in the Metropolitan Water Board case, a bank complained of the charges proposed on rateable value, and the officials argued that it would pay to cut off the water supply and supply all washing-bowls, W.Cs., etc., with Heidsieck at a guinea a bottle.

[2] Cf. Wills, op. cit., p. 547. "Mellish, L.J., in the course of his judgment at p. 60 said, '. . . are the corporation according to the true construction of the Public Health Act, prevented from charging for the use of water a larger sum than the sum they actually require for the maintenance and repair of the waterworks? . . . We think that the Corporation in making a water-rate under S. 93 of the Public Health Act, 1848, are bound to make an estimate of the sum they actually require for the maintenance of their waterworks, and cannot legally levy a larger sum by a water rate than the sum they so require.' "

Owing to the large part which capital costs have in the total costs of water supply, and owing to the fact that this depends, apart from other variable considerations (the rate of interest on capital, for example), upon the geographical situation of the area, water charges vary tremendously from area to area. The average charge is about 10 per cent on rateable value; but in some areas it is as low as 5 per cent and in others as high as 20 per cent. Some allowance must be made in interpreting these variations for the fact that there is still a considerable want of uniformity in rating valuation from area to area, and within each area also.

Local authorities are compelled, where it is needed, to provide a sufficient supply of "wholesome water"[1] *for domestic purposes*, and the purity is subject to the control of the central authority. The Ministry of Health requires local Medical Officers of Health to include in their annual reports a survey of water supply. The obligation supplemented by the duty of local authorities to take steps from time, to time as may be necessary for ascertaining the sufficiency and wholesomeness of the supplies in their district, might in the end result in action in default as the result of complaint to the Minister,[2] and finally by *mandamus*,[3] if the local authority did not meet the criticisms and orders made by the Ministry of Health regarding its supply.[4] This is no light burden, and it naturally affects the cost of production, and the price paid, whether by the consumer *qua* consumer, or through the rates. For example, Bradford's supply is drawn from moorland gathering grounds. It is stained with peat, and must be treated for an acid reaction with lime, and before it can be used it must be further carefully filtered and sterilized. In rural districts the local authority may require the owner to provide a supply within a reasonable distance of his house on the report of their medical officer or sanitary inspector.

---

[1] Section 115, Public Health Act, 1936, re-enacting part of Section 55, Public Health Act, 1875, which used the phrase "pure and wholesome," and this went back to the Act of 1847.

[2] Sections 321–325, Public Health Act, 1936.

[3] Jennings, *Public Health Act*, 1936, p. 42, and see also *Joint Committee on Water Revenues*, vol. ii, p. 5.

[4] Cf. the Ministry of Health's Report on the Bacteriological Examination of Water Supplies (1934 and 1939), and Memorandum 221 of 1939 "on the safeguards

The Public Health (Water) Act, 1878, in order to secure economical administration, requires urban local authorities, on the application of ten ratepayers, and rural districts on the application of five in the contributory place, to charge water rates or rents on consumers supplied by them. A purely nominal charge would seem to meet this requirement, but the Advisory Committee on Water Supplies, while not expecting rural charges always sufficient to meet the costs of production, considered that "reasonable charges" should be made.

In private Acts of Parliament the power to supply by meter is given for the following categories: (*a*) dwelling-houses, used partly for trade or manufacturing purposes for which water is required; (*b*) any private or public hospital, school, or sanatorium or institution capable of accommodating at least twelve persons; (*c*) any boarding-house capable of accommodating at least twelve persons; (*d*) any common lodging-house, club, hotel, public house, inn, restaurant, or hydropathic establishment; (*e*) water required in any premises used solely for trade, business, or manufacturing purposes for the personal use for sanitary purposes of persons employed therein, water for sanitary purposes meaning water used for drinking and dietetic purposes and personal hygiene and for the flushing of urinals and water closets, but not including water used for any other purpose.

For these purposes water is to be supplied at a price not exceeding a prescribed maximum, subject to a minimum quarterly charge (exclusive or meter rent) of one-fourth of the annual amount which would be payable for a domestic supply furnished to a dwelling-house of the same net annual value as the premises or in the case of premises referred to in paragraph (*e*), such part of the premises as may be agreed or, failing agreement, as may be determined by a Court of Summary Jurisdiction.

to be adopted in day to day administration of water undertakings." And Report Public Local Inquiry Outbreak of Typhoid at Croydon, Cmd. 5664, 1938. Failure to take the necessary administrative steps to ensure purity of supply resulted in 341 cases of typhoid, of which 43 were fatal. Claims as the result of legal action or otherwise settled necessitated a loan of £125,000

SALES OF WATER DIRECT TO CONSUMERS BY CERTAIN MUNICIPAL UNDERTAKINGS

YEAR ENDED MARCH 31, 1935

Authority	Domestic			Measured			Domestic and measured		
	Sales in million gallons yearly	Price		Sales in million gallons yearly	Price		Sales in million gallons yearly	Price	
		Total	Per million gallons		Total	Per million gallons		Total	Per million gallons
		£	£		£	£		£	£
Manchester	9,250	385,925	42	5,880	218,679	37	15,130	604,604	40
Liverpool	8,360	165,223	20	3,740	124,038	33	12,100	289,261	24
Birmingham	7,400	664,605	89	3,820	305,011	80	11,220	969,616	87
Sheffield	3,570	339,806	95	2,160	120,204	56	5,730	460,010	80
Nottingham	2,920	213,720	73	1,670	73,750	44	4,590	287,470	63
Hull	2,760	81,376	29	1,360	51,070	38	4,120	132,446	32
Leicester	2,100	213,047	102	1,140	52,489	46	3,240	265,536	85
Southampton	1,950	73,331	38	1,060	67,797	64	3,010	141,128	47
Keighley	496	21,090	42	238	9,185	38	734	30,275	41
Bilston	377	12,665	34	157	7,977	51	534	20,642	39
Watford	503	20,864	41	131	7,051	54	634	27,915	44
Epsom and Ewell ..	268	1,515	6	170	7,412	44	438	8,927	20
Ryde	155	5,527	36	10	1,002	100	165	6,529	40
Hinckley	76	5,653	74	37	2,938	79	113	8,591	76
Greasbrough	19	640	34	2	107	53	21	747	36

SOURCE: *British Waterworks Directory.*

As regards supplies for domestic purposes, local authorities have the power to make terms and conditions as they think fit. And no person is entitled to a supply for non-domestic purposes if that would interfere with the supply for domestic purposes. The local authority is not liable for penalty or damages for failure to supply which arises from frost, unusual drought, or unavoidable cause or accident unless the agreement so provides. The phrase "for other than domestic purposes" includes supplies for watering gardens, fountains, or any ornamental purposes, bathing pools and swimming baths, cattle or horses or washing carriages or motor vehicles, where these are kept for sale or hire by a common carrier, any machines or apparatus, flushing sewers, road watering, or public baths, and any trade, manufacture, or business.

Local authorities who supply water either in bulk or otherwise outside their own areas charge more than cost, but Parliament tends to require that they shall charge only cost. This does not seem fair, because any deficiency which might arise cannot by law be recovered from the consuming authority, but will be borne by the rates of the supply undertaking. The calculation of the cost of supply for purposes of charging for bulk quantities no doubt makes some allowance for the possibilities of loss. There is great variety in the method of charges for bulk supply. Some authorities fix a price per thousand gallons, by meter. Some vary the price for "large" bulk and "small" bulk. Some require a fixed annual charge ("for filtration" or "meter rent") in addition to the charge per thousand gallons. Others simply bargain—"by agreement"—with the various applicants, or settle matters "by contract." In these sums most authorities have included an amount above cost—but a number of authorities state that their price is cost per thousand gallons plus an additional amount stated as a sum of money (½d. or 3d. per thousand gallons) or an additional *percentage* to cost. Variations are made according to distance, as well as amount contracted for. Some authorities, of course, are obliged to charge the price settled, in their private Act, as the price of agreement with opposing neighbours.

Local authorities, then, for domestic supplies, establish a charge based upon the rateable value; and many assure themselves of some return from places which may become unoccupied, by requiring a minimum of one quarterly payment. Beyond "domestic supplies" there are special charges, usually by meter. In the case of houses of a value not exceeding £10 the owners are by the Clauses Act, 1847, liable to pay the water rates. The Advisory Committee on Water proposed, in their Report of 1929, that special charges for water closets and baths of ordinary capacity should be regarded as a normal domestic purpose to be covered by the ordinary water charge based on the net annual value. This differentiation arose in the nineteenth century when water closets and baths were uncommon. In recent private Acts the first water closet or the first bath of ordinary capacity is paid for at the domestic rate. Beyond that a special charge may be made.

The definition of "domestic purposes" is not to be found in the existing statutes, though some judicial opinions have introduced a degree of uniformity.[1] The practice has been for private Acts to assume that all is domestic and then state those uses which were *excluded* from the meaning. Consequently, there is still much variety and confusion. The Central Advisory Water Committee have proposed a positive definition.[2] Local authorities are not *compelled* to provide supplies for trade and other purposes. Their Orders or Acts permit them to supply on such terms and conditions as they think fit. It was represented to the Central Advisory Committee that undertakings should be obliged to supply. The Committees, however, thought that the supply for domestic purposes ought to be the first charge, but in Clause 5 of their Draft Bill allowed for an appeal to the Ministry of Health on the reasonableness of a refusal to supply and disputes about terms and conditions.[3]

The foregoing are the general conditions, statutory and otherwise, concerning the fixing of water charges. In practice local authorities proceed, in general, on the following lines in establishing their charges and rates. In borough and urban authorities the fundamental principle appears to be that the total income from both domestic and non-domestic charges shall cover the expenses of the provision and supply of water. An attempt is made to secure that there will be neither a deficiency nor a surplus on the revenue account of the undertaking. In some instances, however, a small deficiency is estimated for and met as part of the general expenses of the authority, and in other cases a surplus is definitely budgeted for, and (unless there is a special Act with restrictions) the surplus is applied in aid of other services. (This, however, as we have indicated in the chapter on "Rate Aid," is a declining practice.)

[1] Cf. Wills, op. cit., pp. 186 ff.

[2] Cf. Second Report, Cmd. 5986, 1939, p. 18; and Draft of a Water Undertaking's Bill, prepared by Central Advisory Water Committee, Cmd. 5987, 1939 (p. 25), 1st Schedule, Definitions.

[3] Ibid., p. 23.

In some cases, mainly rural, the authority or particular officer concerned has never accurately ascertained the cost per thousand gallons of the supply of water, and, therefore, neither with respect to domestic or non-domestic users is it possible to say whether the charges to either or both cover cost. The only guiding principle is that the total income from both classes of consumers balances the revenue account. But usually boroughs and urban districts, knowing the income to be derived from non-domestic users based on cost, adds to the relative cost charge per thousand gallons some figure of profit which may normally be between 10 and 30 per cent of the cost. The deficiency which then remains on the revenue account is met by an appropriate charge to domestic consumers, that is, based on net annual value, as already explained. If there is a sudden increase in cost, attention is usually first directed to whether the charges for non-domestic consumers should be increased with a view to avoiding, where possible, any alteration in what has become the accepted charge to domestic users.

With regard to rural districts, there is no general principle of covering cost in the case of domestic supplies. A charge, such as something between 5 and 7½ per cent on rateable value, is levied on the principle that the consumer will not bear more, as there is frequently the alternative of wells or other storage, a condition which does not apply to anything like the same extent in the boroughs and urban districts. It is also accepted that public health grounds justify the placing of a loss in respect of these domestic supplies upon the whole body of the ratepayers.

Invariably it is found in rural districts that the domestic and trade income is insufficient to meet all the expenses and that a deficiency rate has to be levied over the whole body of ratepayers.

As we have explained in a former chapter, the law provides for water schemes, in the first instance, being on a parochial basis, and there are powers for making general contributions to the special expenses of parishes. In the case of water supply the power to make contributions is becoming more extensively used. If some rural districts have been behind in connection with the supply of water, the fault is primarily the Government's for not earlier enabling rural districts to spread their expenses over the wider area of the district instead of restricting them to the parish unit where in so many cases the isolated resources of such units have been so small.

In regard to non-domestic and trade users, the general principle of charge is something over cost and the margin appears again to

STATISTICS OF CERTAIN MUNICIPAL WATER UNDERTAKINGS

YEAR ENDED MARCH 31, 1935

Undertaking	Miles of mains	Sales, in millions of gallons yearly		Consumers, in thousands	Percentage of sales			Price received per million gallons	
		Total	Per main-mile		Domestic	Measured	Bulk	Domestic and measured	Bulk
					Per cent	Per cent	Per cent	£	£
Manchester	1,467	18,200	12·4	1,517	51	32	17	40	25
Liverpool	1,213	14,440	11·9	1,081	58	26	16	24	28
Keighley	68	760	11·2	50	65	31	4	41	65
Sheffield	749	7,560	10·1	778	47	29	24	80	30
Watford	68	634	9·3	52	79	21	—	44	—
Bilston	58	541	9·3	45	70	29	1	39	—
Birmingham	1,492	11,960	8·0	1,077	62	32	6	87	21
Hull	572	4,310	7·5	363	64	32	4	32	36
Epsom	65	438	6·7	31	61	39	—	20	—
Nottingham	737	4,660	6·3	453	63	36	1	63	23
Leicester	595	3,540	5·9	389	59	32	9	85	34
Southampton	588	3,010	5·1	304	65	35	—	47	—
Greasbrough	5½	21	3·8	3	90	10	—	36	—
Hinckley	50	182	3·6	29	42	20	38	76	60
Ryde	60	165	2·6	49	94	6	—	40	—

SOURCE: *British Waterworks Directory.*

vary between 10 and 30 per cent of cost. Yet it is important to observe this. In certain areas, especially industrial, supplies of water for trade purposes are charged on a wide view of what is to the general municipal advantage. It may be desired to attract industries and so increase the rateable value of the area, to increase the users of municipal trams and buses and electricity or gas. This involves a complicated calculation of whether a less than cost-price charge for water is offset by the gains to the General Rate Fund resulting from the policy of development. Such contracts are given special attention by Manager, Water Committee, and the Borough Treasurer and Finance Committee.

The table on page 368 indicates the differences in the "domestic" and the "measured" water charges. It is interesting to notice that the big industrial centres charge less for the latter than the former. Table page 372 indicates the percentage of sales of each, domestic, measured, and bulk, and the price received for bulk relatively to the former.

Where water is not taken by meter by different trades, the variety of charge is based entirely on the knowledge of the average quantity of water which the various trades use in relation to the cost of water.

The application of these principles is extraordinarily difficult as, outside domestic and meter supplies, local authorities attempt to distinguish between amounts consumed by different users, and therefore the cost to the undertaking. There is a rather less than more accurate assessment of probable quantities, of cost of production, and fixed charge. There is variation in regard to meter charge, where meter supplies are taken, again, varying with cost considerations. The complication and variety can only be appreciated by the actual perusal of the lists of charges in an actual case. We put that of Leeds in an appendix to this chapter.

We have observed already what a remarkable variety pertains in actual prices of water throughout the country. This variation must strike the citizen as astonishing and he may think of it as unjustifiable. It is to a large degree due to the lack of vision exhibited by Parliament and the local authorities throughout the last century. Much of the want of foresight is excusable: there were developments of population, industry, and the location of both which could not be foreseen with the degree of certainty justifying and able to persuade majorities to accept unprecedented measures of large-scale reorganization. The revision of areas is the condition precedent to an abatement of the variety of charges. No doubt as between much larger regions, even if within them a substantial equality of charge can be introduced, there will still be unavoidable differences. For the *kind* of water available also determines the cost of production. An instance of this has been cited. The Bradford supply comes from moorland gathering grounds, stained with peat. The discoloration must be overcome. So also must its acid content be neutralized. Water undertakings must deal with hardness, caused by suspended mineral salts, or with bacteria, requiring filtration, chlorination, etc.—and the cost varies with the impurity of the water.

Water consumption has much increased in recent years, and now the average figure is from 20 to 30 gallons per head per day in urban areas,[1] and from 15 to 20 gallons per head in rural areas. There is a reasonable presumption that some of it may be wasted, especially as there is no direct relationship between its economical use and saving in cost to the individual consumer, owing to the method of charge. There must be, and normally there is, a careful control of waste. Indeed, it has been estimated that 25 per cent of the total water supplied is "wasted,"[2] that is, allowed to run away without any utility at all, or the smallest of utility scarcely warranted by considerations of cost of production! An illustration of the problem of waste is given by Mr. Alban, the expert on waterworks management.[3] "Instances could be quoted where large schemes of capital expenditure for waterworks extension have been put off for another generation—without any disadvantage as regards water supply, but with great financial advantage—by the acceptance of a waste prevention scheme, e.g. Pontypridd and Rhondda Joint Water Board, when the daily average of 40 gallons per head in 1911 had been reduced to 20 gallons in 1925." This point is generalized and reinforced by the firm opinion of the Central Advisory Water Committee.[4]

Local authorities have powers under private Acts and their general powers under public health statutes to make by-laws preventing and punishing waste.[5] Private Acts give power to make regulations for preventing waste, misuse, undue consumption or contamination of water supplied by them, and to prescribe the size, nature, materials, and strength and the mode of arrangement, connection, disconnection, alteration, and repair of all water fittings. The Ministry of Health, assisted by expert engineering advice, has established a specification for water taps which may bear its mark when up to standard, and from time to time (especially on the occasion of requests for loan sanction) has drawn attention to wasteful practices and slack inspection. Furthermore, since 1900 it has issued a set of Model By-Laws on "Prevention of Waste, etc., of Water." The latest draft is that of 1936, and was established after consultation with and much assistance by the British Waterworks Association. Moreover, manufacturers of water fittings and consumers had representation on the Consultative Committee and were particularly useful in agreeing upon the details of construction, which play so great a part in the cost of fixing and repairs, and the elimination of waste. Special attention is paid to pipes, taps, and valves for resistance of prescribed pressure, cisterns, hot-water apparatus, baths and lavatory basins, overflow pipes. By-laws provide for penalties for their violation, and for entry to premises of surveyors or inspectors on behalf of the undertaking. To implement these by-laws the local authorities maintain a force of inspectors. One cannot quite disintegrate the costs of mere inspection from other working costs, but Leeds, 1937–38, spends about £5,300 a year on "waste water prevention," on about £450,000 annual water expenditure; Sheffield, £7,400, on about £600,000. It is highly doubtful whether all is done that can be done to reduce waste. Local authorities are too apt to think of the expenditure on the salaries of surveyors and inspectors than of the gain to the profit and loss returns by the reduction of the water lost.[1] There is one consideration which in part excuses their want of aggressiveness—the annoyance caused to the ratepayers by house-to-house visitation, or action upon reports by neighbours. Even in times of drought the citizen is apt to excuse his own wastefulness by the opinion that the next-door neighbour ought to start economizing first. The Central Advisory Water Committee has proposed a great strengthening of the power to prevent waste in its Draft Bill.[2]

---

[1] Gibbon, Evidence, Joint Select Committee on Water Resources; and cf. note, p. 376.

[2] Cf. *Economist*, January 23, 1937. This estimate was quoted without contradiction in the *Official Circular*, British Waterworks Association, August 1937.

[3] Cf. *The Waterworks Undertaking*, p. 18.

[4] Second Report, p. 30.

[5] Section 57, Public Health Act, 1875; and Sections 182–186.

A certain proportion of the sales of water are to the various departments of the authorities. Total figures for the whole nation are not available, but examples illustrate the situation. In 1938 Ossett sold water by rental to the value of £6,597, for trade purposes £3,141, and "for Corporation purposes" £620. In the same year Burnley sold to "Corporation departments" to the value of £7,793, and to all other consumers, £59,303.

---

[1] Yet Sheffield (cf. p. 368, *supra*), could have suffered a waste of about 80 million gallons for this sum spent on prevention of waste.

[2] Cf. Second Report, p. 30, Draft Bill, part xiii.

The principles of charge are as follows: For road watering and sewer flushing a few authorities make no charge at all. Most do make a charge. Where this occurs they charge a lump sum per year or for quantities as measured. In the former case the amount is very small; in the latter they charge below the rates for measured supplies to trade, sometimes considerably so, sometimes but slightly. The next class of water supply for public purposes is public conveniences. In some cases there is no charge; in other cases there is a fixed charge of so many shillings per quarter; in still other cases the same principle is adopted as for road watering and sewer flushing. The third class is public baths. Here there is sometimes a charge based on net annual value; sometimes a fixed charge per year of small dimensions; more often a charge, as in road watering, etc. Finally, the public municipal departments are supplied on the foregoing principles. There are variations as between authorities, and even in the same authority the different classes may be treated differently, either as to quantum or principle. The main point is that the public departments are supplied as a rule at nominal charge, and in any case much below the cost of production, at a much lower charge than ordinary measured supplies, and at a good deal less than bulk supplies to outside authorities.

NOTE: Jameson & Parkinson, *A Synopsis of Hygiene*, give a very interesting analysis (6th Edn., p. 420) of the minimum amount of water required per head per day in a town:

		Gallons
Household ..	Drinking	0·33
	Cooking	0·75
	Personal washing	5·00
	Dish and house washing	3·00
	Laundry	3·00
	W.C.	5·00
Trade purposes	.. ..	5·00
Municipal ..	Street cleaning	5·00
	Public works, etc.	
	Flushing sewers	
	Fire extinguishing	
Unavoidable waste	.. ..	3·00
		30·08

APPENDIX

LEEDS: SCALE OF WATER CHARGES

From March 4, 1936

Population about 492,000

DWELLING-HOUSES	Percentage of Annual Value
£20 annual value and under	7½
Over £20 and up to £40	7
„ £40 „ „ £60	6½
„ £60 „ „ £80	6
„ £80 „ „ £100	5½
„ £100	5

SHOPS WITH DWELLING-HOUSES ATTACHED, HOTELS, PUBLIC HOUSES, BEER HOUSES, REFRESHMENT HOUSES and other premises of a like character:

The same charges as set out above for dwelling-houses.

LOCK-UP SHOPS, OFFICES, FACTORIES, WAREHOUSES, WORKSHOPS and other premises not being dwelling-houses) where water is used for domestic purposes:

One-half of charges as set out above for dwelling-houses.

An addition of 10 *per cent is made to the Annual Charge for premises outside the City.*

IN ADDITION, the following charges are payable for WATER CLOSETS:

For one water closet where the annual value of the premises does not exceed £10	2s. 2d. per tenant, per annum.
For one water closet where the annual value of the premises exceeds £10 but does not exceed £17	5s. 2d. per tenant, per annum.
For one water closet where the annual value of the premises exceeds £17 but does not exceed £20	7s. 6d. per tenant, per annum.
For one water closet where the annual value of the premises exceeds £20	8s. 6d. per tenant, per annum.
For every additional water closet where the annual value of the premises does not exceed £10	2s. 2d. per tenant, per annum.
For every additional water closet where the annual value of the premises exceeds £10	3s. per tenant, per annum.
Water closets provided with a three-gallon flush	2s. per annum extra.

Water closets outside the City 20 *per cent additional to above charges.*

SUPPLY OF WATER BY METER

1s. per 1,000 gallons up to 400,000 gallons per quarter.
11d. per 1,000 gallons from 400,000 to 800,000 gallons per quarter.
10d. for each 1,000 gallons over and above 800,000 gallons per quarter.

Minimum Charge for supply by meter, 12s. per quarter.

METER RENTS

For a ⅜ in. meter	3s. per quarter.
,, ½ in. ,,	4s. ,,
,, ¾ in. ,,	5s. ,,
,, 1 in. ,,	6s. ,,
,, 2 in. ,,	8s. ,,
,, 3 in. ,,	12s. ,,
,, 4 in. ,,	20s. ,,
,, 5 in. ,,	30s. ,,
,, 6 in. ,,	40s. ,,

MISCELLANEOUS WATER RENTS

Aerated water manufacturers	By meter.
Aquariums	24s. per annum (minimum).
Athletic and recreation grounds for tennis, cricket, football, bowling, etc.	24s. per annum (minimum). Shower sprays—see Sprinklers (garden). Extra for hose pipe (garden) at rates set out. Extra for sprinklers (garden) at rates set out, or by meter.
Allotment gardens	1s. per 100 square yards per annum.
Bacon washing	By meter.
Bakers	2s. 6d. per 100 bags of flour of 10 stone weight per annum.
Baths (other than ordinary)	By meter.
Blacksmiths	9s. each fire per annum.
Blue-print washing	6s. per annum (minimum.
Boilers	According to fuel consumption.
Boiling bones	24s. per annum.
Bottling stores	By meter.
Bottle washing	By meter.
Brewing	1s. 2d. per quarter of malt brewed, or by meter.
Builders' yards	24s. per annum.
Building purposes—	
Houses, and houses and shops	2s. 6d. per 1,000 feet of cubic contents within outside of walls up to the eaves.
Other buildings	7s. 6d. per £100 value of wet trades or by meter.
Alterations	7s. 6d. per £100 value of wet trades (minimum 2s. 6d.).

Carriages, 2 wheels	8s. per annum.
Carriages, 4 wheels	12s. per annum.
Chemists	12s. per annum (minimum).
Churches and chapels	2s. 6d. per 100 sittings per annum (8s. 6d. minimum).
Coke or breeze washing	3s. per 50 loads, or by meter.
Confectioners and pastrycooks	6s. per annum (minimum).
Confectionary manufacture (cooling plates)	12s. per annum (minimum).
Conservatories (including greenhouses)	2¼d. per superficial yard per annum
Contractors' yards	9s. per annum (minimum).
Cows	4s. 2d. each per annum.
Curriers	9s. per annum (minimum).
Electro-plating business	6s. per annum.
Engines, gas	3s. per annum (minimum).
Engines, petrol	3s. per annum (minimum).
Engines, steam	60s. per h.p. per annum.
Engines, traction	30s. per quarter or less period of a year for which an excise licence is in force.
Farms (dairy)	By meter.
Feasts, fairs, etc.	Special charge according to circumstances.
Fields	1s. 8d. per acre per annum.
Fire hydrants	50s. (12s. 6d. for each additional) per annum.
Fishmongers	12s. per annum (minimum).
Flushing cisterns for bakehouses	Same charges as for water closets.
Fountains, ornamental ponds or water courses, etc.	By meter.
Fried fish dealer	6s. per annum (minimum).
Gas compressor	6s. per annum (minimum).
Grindstones	6s. per grindstone per annum.
Hairdressers	6s. per annum for the first basin, and 3s. each additional basin.
Hoists	By meter.
Hoop slacking	6s. per annum.
Horse dealers	3s. 6d. per stand per annum.
Horses	7s. per annum.
Hose pipe (garden)—	
To be held in the hand when in use	12s. per annum.
When used other than by holding in the hand (i.e. left lying on the ground, hung or fixed on a frame, tree or any other fixture whatsoever)	The charge to be fixed on the Garden Sprinkler scale according to the capacity to deliver water. Note.—In no case shall the supply of water for a garden hose pipe be arranged for a shorter period

Hose pipe (garden)—*continued.*	than twelve months. A hose pipe included in the charge for motor cars shall not be used for garden purposes without application having been made to the Waterworks Department and subject to an additional charge.
Heating apparatus	2s. 6d. per annum (minimum).
Hydraulic presses	6s. per annum.
Ice cream manufacturers	6s. per annum (minimum).
Laundries	By meter.
Leather soaking	3s. per annum (minimum).
Lime washing	6s. per annum (minimum).
Malt kilns (steeping)	By meter.
Manure damping	48s. (minimum), or by meter.
Market or nursery gardens	6s. per acre, per annum. Extra for hose pipe (garden) at rates set out. Extra for sprinkler (garden) at rates set out.
Milk cooling	According to number of cows kept, 10s. per quarter (minimum).
Milk dealers	6s. per annum (minimum).
Motor cars (including tri-cars)	3s. per quarter or less period of a year for which an excise licence is in force. NOTE.—This charge covers a hose pipe used solely in connection with a moter vehicle, but if used for garden or other purposes an additional charge is payable.
Organs	By meter.
Photographers, professional	36s. per annum (minimum).
Physicians and surgeons	5s. per annum (minimum).
Pigs	1s. 2d. each per annum.
Pigs (slaughtering)	3s. per 50 pigs per annum.
Plasterers' yards	12s. per annum (minimum).
Printers	15s. per annum (minimum). Extra for litho. stone washing, 12s. per annum (minimum).
Printers' type-casting machines	20s. per annum.
Public-house stands	1s. 8d. per annum.
Refrigerators:	
Class I. For non-thermostatic types of refrigerators	(*a*) Where the flow of water used for a refrigerator does not exceed 3½ galls. per hour, 24s. per annum.

Refrigerators:—*continued.*

	(*b*) Where the flow exceeds 3½ galls. but does not exceed 7 galls. per hour, 48s. per annum.
Class II. For thermostatic types of refrigerators. (50 per cent less than Class I.)	(*a*) Where the flow does not exceed 3½ galls. per hour, 12s. per annum.
	(*b*) Where the flow exceeds 3½ galls. but does not exceed 7 galls. per hour, 24s. per annum.

Class III. Refrigerators consuming more than 7 galls. maximum per hour to be charged for by meter on the terms and conditions and at the current meter rates or by agreement.

Rhubarb sheds	5s. per 100 square yards per annum.
Sausage or polony manufacture ..	6s. per annum (minimum).
Schools, day	By meter.
Schools, Sunday	8s. 6d. per annum.
Slaters' yards	12s. „
Slaughter houses	12s. per butcher, per annum.
Soda fountains	By meter.
Spot welding machine	5s. per annum (minimum).
Sprinklers (garden):—	
Not exceeding 100 gallons per hour	24s. per annum.
Exceeding 100 gallons but not exceeding 230 gallons per hour	32s. 8d. per annum.
Exceeding 230 gallons but not exceeding 360 gallons per hour	41s. 4d. per annum.
With a capacity exceeding 360 gallons but not exceeding 500 gallons per hour	50s. per annum.
With a capacity exceeding 500 gallons per hour	By meter.

NOTE.—All sprinklers to be tested, approved, and stamped by the Waterworks Department before being put into use.

These charges to include for the use of one hose pipe connected to the sprinkler in each case.

In no case shall the supply of water for garden sprinkler be arranged for a shorter period than twelve months.

Sprinklers (fire)	£6 6s. per annum per installation.
Steam presses	Up to 4, 60s. per annum. Each additional 15s. per annum.
Steam waggons	30s. per quarter or less period of a year for which an excise licence is in force.
Stonemason's yards (stone dressing)	9s. per annum (minimum).

Street watering	Meter rates.
Suction plants	72s. per annum (minimum).
Surgeons and physicians	5s. „ „
Taps (outside)	12s. per annum, 6s. each additional per annum.
Tobacco damping	6s. per annum (minimum).
Tripe dresser	By meter.
Urinals, private	12s. 6d. per stall per annum.
„ „	Perforated pipe, 7s. per foot per annum.
„ public	By meter.
Vacuum plant for steam presses	6s. per annum (minimum).
Willow steeping (basket making)	15s. per annum.
Window coolers	By meter.

Miscellaneous Rents for supplies outside the City .. 20 *per cent additional to above charges.*

Chapter Twenty-one

STIMULATION OF SALES AND SERVICE

It has already been indicated in the discussion of price-fixing that local authorities experiment with their supplies in order to achieve the greatest possible supply at the minimum cost. To do this they must send out salesmen and attempt to prevent the taking of business from them by the competing substitute. In recent years, competition between electricity and gas has increased to a point which may now be described as violent, to the benefit of consumers of each, because until the advent of heavy competition the gas industry was a little slack and virtually said in the words of a too complacent manager, "Gas sells itself." The competition of electricity has caused the gas industry to combine to advertise, to devise new tariffs, to question its methods of manufacture and supply, and to offer a continuous service to the consumer in keeping his apparatus at the maximum efficiency and in offering newly invented apparatus on hire-purchase terms. It has awakened local authorities to new methods of salesmanship, to the need of research in their laboratories (in the large industrial towns, of course) into the industrial uses of gas, and to introduce domestic apparatus which consumes a disconcertingly reduced amount of gas for the same efficiency as before.

Let us review some of these developments. The foremost gas-producing municipality is Birmingham. The Birmingham Research Laboratories are famous all over the world and her experts are consulted by other municipalities. She has discovered industrial uses of gas, tested them, and convinced local manufacturers of the quality of the service and the cheapness of the fuel. The Birmingham plant is the largest in the country, with the exception of those in London,[1] and supplies an area of 140 square miles. There are other places which have established laboratories, for example, Rotherham. The latter used to retain the services of the Birmingham Laboratories, but arranged with its Education Committee in 1932 that one branch of the Technical College should be developed as an industrial gas laboratory.

The gas undertaking in Birmingham sells over 30 per cent of the gas for manufacturing and motive power, and the gas department's technicians are at the service of the industrial firms. The undertaking offers to industrialists advice and information free of charge, but in expertness and disinterestedness perhaps unique in the world. Large and small gas furnaces of all types are installed at the demonstration room and manufacturers can try the methods with their own materials and workmen before purchase. There is an after-sales service for repair and maintenance.

---

[1] That is, the Gas Light and Coke Company and the South Metropolitan Company.

Smethwick in 1931 copied Birmingham's famous industrial research laboratories in order to extend the use of gas to the manufacturers in its area, with remarkable success.

Leicester has made a special effort to secure central heating by gas to take the place both in factories, public buildings, and private residences where formerly oil or coal or coke was used. From 1934 to 1936, the industrial and commercial load of the department was increased by over 50 per cent. Commencing with the Town Hall, and overcoming unexpected resistance there, it obtained instruction from the Nottingham Gas Department, and then gradually pushed forward its experiments, its installations, and its work of converting old boilers, with remarkable success and a great saving in expense and convenience to its consumers. The conversion set had actually to be specially designed for the purpose.

Stoke-on-Trent has, in common with other places, discovered methods of supplying cheap town gas for pottery firing as an inducement to the manufacturers to take bulk supplies.

Nottingham is especially energetic in pushing central heating by gas and gas-fired boilers which are inspected, cleaned, and overhauled free of charge; and has a regular maintenance service. Burnley has introduced a so-called "cottage set," that is, a pendant lighting set, bowls, switch, and gas iron, and payment is made for this by a reduction in the amount of gas supplied per penny. This venture, proving successful, the undertaking extended the method of payment to other appliances up to a price of £10.

Local authorities, both for gas and electricity, are eagerly pursuing the policy of gas salesmanship laid down by the late Sir Francis Goodenough:

> "You cannot give good service to the customer, you cannot study his or her needs, tastes, or circumstances; you cannot win confidence based upon satisfaction unless you have (1) suitable showrooms, (2) means for insuring skilled installation and maintenance work in respect of, every class of gas-consuming appliance; and (3) staff thoroughly

> educated and trained in gas supply technology and salescraft alike in the district, in the showrooms, at the enquiry counter, and in the office also. You cannot, furthermore, do what you might with the best of service and the finest of staff if you do not tell your customers about your organization and all the facilities at their disposal. Publicity is the handmaid of salesmanship, and must play a leading part in every sales policy."

This is matched by the recommendation of the Electricity Manager at Birmingham, in his Presidential Address to the Institute of Municipal Electricity Authorities. "Assuming, therefore, that undertakings have suitable showrooms with adequate and well-trained staffs, success is largely dependent thereafter on advertising and propaganda. Such propaganda should primarily aim at awakening the public to a full realization of the service we offer them, and the resultant benefit to themselves. There is much truth in the old saying that conveniences are not missed where they have never previously been enjoyed, and we must therefore tell, and continue to tell, people what they are missing. They want cleaner and better kitchens, they want more attractive forms of internal such as can be devised by artists and engineers working in collaboration. They want attractive and efficient cookers and water-heaters and refrigerators, and so on. These things are now available on reasonable terms, and it is our business to make known this fact as much as possible, by means of attractive and intelligent advertising."

The advent of the therm unit was a great advantage to gas salesmen, but they complained that it is still too unwieldy when one wishes to make comparisons between the price of gas and electricity units. However, they have contrived to show in simple terms what the various uses of gas would cost per week, per month, and so on. Nor are local authorities lacking in the power to invent advertising slogans. Lincoln, for example, no doubt brought profit-yielding shame to the prodigal by its admonitory pronouncement, "The price of ten cigarettes a week purchases a new gas cooker."

Both electricity and gas undertakings have in many places organized cookery lectures. The West Ham Electricity Showrooms, opened in November 1930, are an especially good example. They contain demonstration rooms for apparatus and lectures, model kitchens, and offices. The kitchens supply meals for the staff. Poplar has dramatized the advantage of modern electric homes by stage performances in which the dwellers in old and modern kitchens talked at the audience of potential electricity consumers through their dialogues. The purchase and hire of electric cookers were much increased.

Much care is spent on the location and design of showrooms, and there is considerable difference of judgment regarding the attractiveness of the various lay-outs possible. The Chesterfield electricity showrooms opened in March 1935, were designed with a Tudor cottage frontage. Inside it are a transformer sub-station, stores, an all-electric flat, and a demonstration room holding one hundred people. Birmingham has had made a five-minute film showing the generation and control of electricity at the Hams Hall Station, puts the subject in a setting of the history of industry and labour, and then shows entertainingly the uses of electricity in the home. Housekeeping "advisers" are being appointed. The Hull Electricity Department, for example, has gone beyond this and is now equipped to give specialist advice to householders, architects, and builders on efficient planning of kitchens. The British Commercial Gas Association (which includes municipal and private undertakings) has a very interesting and attractive series of pamphlets, leaflets, and brochures, good in phrasing, attractive in colour, and realistic in photography, which with local variations are used by the municipal undertakings.[1] For both electricity and gas local authorities maintain "show houses." Among the devices of salesmanship, Salford has sent round a decorated car with the local hospital pageant.

Various "Gas Development Associations" or Centres have been established throughout the country to promote the use of gas. A particularly thriving undertaking sent the author the following information:

> "Our Association was formed in January 1934 with the object of interesting women in the use of gas appliances. We hold monthly meetings in the Gas Showrooms, and have cooking and other lectures and demonstrations, and pay visits to works where gas appliances are made, or where gas is used for power, and so educate the ladies into the use of modern appliances. We have visited cafés, hotels, large stores, foundries, glass works, and bakeries, and had all kinds of lectures on food values, health in the home, smoke abatement, water heating down the ages, laundry work, cookery, refrigeration, kitchens of Europe, and many other topics. One afternoon we called 'Members' Day,' and the Members were invited to bring complaints or suggestions for improvements to their gas appliances, and the Showroom Manager was present to answer questions and give advice.
>
> We have also had a few cookery Competitions, and we have an annual Outing, always with some business object. This year we are going to Liverpool, and are including a visit to the New Gas Show-

---

[1] And cf. *The Manufacture of Town's Gas*, by Birmingham, and *Gas for Firm at 3d. per "Therm,"* Glasgow.

> rooms in our programme. We also have an annual Whist Drive and Dance on the anniversary of our formation. We have 120 Members, and our Gas Manager has been delighted at the results of our efforts. The business has grown wonderfully since our formation, and we feel repaid for our work. We always ask the present Mayoress to be our President, and at the end of her term of office she becomes a Vice-President. Our Committee is composed of the wives of the Aldermen and Councillors who form the Gas Committee of the Borough Council, along with 6 co-opted members from the members of the Gas Development Association."

We need not recapitulate for electricity the various incidents and items by which we have exemplified the vigour of municipal gas undertakings. They are roughly the same. Both, for example, keep in close touch with local contractors either through informal contact, or occasionally Joint Committees or Development Circles. A fierce battle in the world of electricity is that over showrooms, and on this there is much heated controversy and grumbling at the refractory smaller authorities who either cannot afford to establish one or who have not the initiative to do so. This is not always the fault of the Council and the Department, but of bodies of local citizens, who become spitefully angry at any businesslike step of the authority. For example, the *Dover Express* of December 28, 1934, reported that showrooms had been opened at a cost of over £6,000. "As a result of the activity of the sales department thereof, a deputation of the Chamber of Commerce presented a strong protest against this municipal trading at a meeting of the Dover Electricity Committee on December 3rd."

For gas and electricity showrooms many authorities now recruit women. The Electrical Association for Women has established a Certificate and Diploma for salesmanship; and local authorities of any size are fully alive to the need of recruiting such candidates.

Salford since 1935 has been building up a special staff of advisors to ensure that the domestic appliances in consumers' homes should be inspected twice a year. For this purpose boys leaving secondary school at the age of sixteen are engaged and trained for maintenance work from which they will later be transferred to the sales staff or the meter inspectors according to their capacities.

Rotherham Corporation expects all its employees in the gas department who come in contact with the public to regard themselves as salesmen. The meter inspectors, the gas fitters, and the maintenance men are warned of this duty of salesmanship. Leeds divides up its area into five districts with a representative and inspector who keep an up-to-date index of consumers, and the Corporation has a large portable demonstration van, or, in other words, it takes the showroom to the consumer. The city offers commissions to local tradesmen plumbers, gas fitters, and ironmongers if they secure orders for apparatus. Coventry has two sales sections—industrial, and the other for builders and architects. In Bradford in 1933 the Corporation electricity undertaking offered to install grill-boilers for a seven days' trial free of charge. Temporary wiring was supplied free of charge by arrangement with local electrical contractors. This had a great degree of success.

Various authorities have a system of keeping an up-to-date census of consumer appliances with especially trained salesmen to persuade consumers to get rid of the old ones. From time to time special "drives" are undertaken to push sales, with special temporary instruction of canvassers assisted by advice from the B.E.D.A. or the British Commercial Gas Association.

BOOK FOUR

CONCLUDING OBSERVATIONS

Chapter 22. The Balance of Deterrents from and Incentives to Efficiency
„ 23. The Factors of Success and their Development

To

Darling

I am happy. I pray with
god That you will be also
day and night happy
for my life.
dear you spend your letter
on my house's addres

You lover.

O. M.

will... ——————

Chapter Twenty-two

THE BALANCE OF DETERRENTS FROM AND INCENTIVES TO EFFICIENCY

I

AT the risk of some reiteration these Concluding Observations have been distributed among two chapters instead of concentrated in one. The reason is that the observations on incentive in municipal enterprise made throughout the work deserve a combined presentation. In undertaking this in the present chapter, and occasionally in the next, it has been considered instructive to take particular note of the observations made by Professor Pigou in his treatment of the Public Operation of Industries in *The Economics of Welfare.*[1] This has been done because Professor Pigou has there presented the best short conspectus of the weaknesses of public (though not specifically municipal) operation, and quotations give added point to the actual lessons of municipal experience. He, however, by no means touches upon all the material factors, and is only quoted where he does.

II

The problem of commercial and industrial incentive is not psychologically simple, but highly complex. The subject is by no means settled by a bare, confident, and deductive reference to the hope of material gain or fear of loss as the spur to effort and inventiveness. There is not one, there are a number of psychological factors involved, some engendering peculiar administrative arrangements and procedures, while others are themselves developed and animated by stipulated institutional forms. We set out those which restrict the full operation of economic development in municipal enterprise, and those which combine to maintain it in healthy and progressive productivity.

---

[1] Fourth edition, chap. xxii.

Firstly, local authorities are not likely to strain themselves to undertake ventures involving the raising, and therefore, the risking of capital. Pigou makes much of this factor, with some justification. He says:

> "Anything which restricts unduly willingness to make ventures in any industry must still, therefore, threaten heavy loss. The point I have to urge is that a public body engaged in industrial operations is *likely* to restrict unduly this willingness."

His reasons are three. (*a*) Public authorities recognize that failure on their part will produce public revulsion against government. But the answer that experience gives to this is that it is an extremely weak, an almost imperceptible, motive in municipal undertakings. The apprehension of failure (if, indeed, there is any) is dissipated by extremely diligent previous calculation and judgment (and central and Parliamentary control) of commercial possibilities. Secondly, (*b*) the government, being founded on the party system, must know that failure will open the way into power for their opponents. This motive, again, is practically inapplicable to the present stage of municipal enterprise. Councillors simply do not think in such terms. Neither (*a*) nor (*b*) has much psychological validity. Where councillors are shy of commercial risk, it is not due to a sanction such as those postulated by Pigou, but to disinterested public-spirited unwillingness to cause others to suffer loss. (*c*) Pigou says, further, that there is more real sacrifice involved when a public authority *compels* people to suffer a risk of loss based on their rateable value, than where the risk is taken by people voluntarily contributing according to the attraction of prospective profits. This is true, but it hardly applies to municipal enterprise in its present stage. Nor is Pigou's assertion that "these persons" (the public authorities) "are partly able to perceive" this truth, valid of the inception of any municipal enterprise.

Of some substance is Pigou's final, and as he says, fundamental point:

> "If inventors must appeal to Government officials, they are confronted, as it were with the average daring of the community, whereas, if they are free to appeal to private enterprise, they can select a group of supporters from persons above this average. . . . It follows that, in general, while the hope of gain operates more strongly on private enterprise than on the public authority, the fear of loss operates more strongly on the public authority. . . . Public authorities are, in general, less willing than private concerns to take risks, or, to put it technically, to

> provide the factor uncertainty-bearing. . . . In some measure all industries, in which possibilities of development remain, demand readiness to take risks if further inventions are to be made, and are, therefore, liable to be hampered by anything that obstructs this readiness. It would, therefore, be an error to suppose that the relatively uneconomic character of public operation, due to the circumstances discussed in this section, is significant only for new industries."[1]

It must be agreed that there is a tendency on the part of municipal authorities to wait until someone else has experimented with a process or an idea, or to await the complete amortization of assumed debt and the dissolution of concrete assets, before a further step is taken.[2] Yet municipal undertakings have ventured capital persistently and on a large scale: this is clearly evident from their history and is mirrored in the available statistics. We have given our own reasons for this, and need not recapitulate them.

Secondly, there is a tendency for local undertakings to become "monopoly minded." They feel that the service is existent and available, that risk and effort have been undertaken to establish them, and that thereafter it is the business of the consumer to set the pace in the development of consumption. Since the personal loss or profit of the councillor is not engaged, there is no sharp stimulus of this kind to force the councillors to seek for business, to go out and sell the commodity or service.

Thirdly, there are financial considerations at work other than those directed to the maximum exploitation of the several undertakings. Works or showrooms or garages or offices are not always located with single-minded attention to the economy of the particular undertaking. Other considerations, the town's beauty, the rateable value of a particular district, the amenity of certain estates, the joint economy of other centralized administrative edifices for local government purposes play, at least, a confusing and sometimes uneconomical part. Again, there is the tendency to raise prices in order to be able to pay a contribution to the rates, resulting from a conflict between the outlook of the councillors as traders and the councillors as responsible to an electorate which dislikes paying rates, and which votes accordingly.

Fourthly, local authorities are *local* authorities. Their responsibility is circumscribed, and their rights are territorially limited. Their mind and interest are focussed upon the welfare of their own area. Law and history conspire to determine and accentuate this. They are not inclined readily to follow the prompting of technological reasoning regarding the merging of their areas in others to secure a wider range of prosperity, or as Pigou properly observes, *reducing* the area of the undertaking where the municipal area is technically too large.

---

[1] Op. cit., p. 401.

[2] Cf. pp. 97–98, 165, 362 supra.

Fifthly, since the single-minded pursuit of personal material reward is not in operation there occurs here and there, and there is always liable to occur, the obtrusion of personal factors, like vanity, prestige, and ambition, to the detriment of a plain business decision regarding organization and methods.[1]

Sixthly, Pigou gives expression to another alleged danger. He says:

> "There is the further difficulty that the employees of a municipal enterprise may play an important part in electing councillors. This may lead some councillors to interfere for political reasons with the disciplinary and other discretionary powers of the higher officials. It has even been suggested that in some towns city engineers have been hindered by the council from introducing labour-saving devices, by which the employment of some of the councillors' electors would be threatened."[2]

Now, in some places the producers are unduly favoured, not of course by the intrusion of municipal employees into local elections, or as members of the council itself (which complaint has a somewhat antiquated flavour), but rather through the intervention of the professional and trade union organizations. This has its effect on conditions and day-by-day discipline and industriousness, as well as upon rates of pay. The percentage of employees to total electorate, even including the relatives of the employees, is so small as not to weigh significantly.[3] But a single representative of "organized Labour" sometimes has a disproportionate effect. This has some influence but not a substantial one on conditions and daily discipline and industriousness as well as upon rates of pay. Pigou's observation regarding the restriction on the use of labour-saving devices is not borne out by experience except occasionally and in a negligible degree. It must be remembered that where the Council is not Labour it will not easily yield on this point; while where it is there is a strong concern for the consumers and the reduction of prices for their sake. Enough examples have been given of the care taken in calculating the value of apparatus; and it might be added that the managers are given their head in matters of office and other labour-saving devices.

---

[1] Cf. Chapter Nine, pp. 163–83.

[2] Op. cit., p. 388.

[3] Cf. Chapter Nine, p. 164.

Seventhly, the foregoing matters derive, in sum, from the basic fact that the councillors are administering a property which is not their own, for a profit which is not theirs personally. However, a loss occasioned by mistake may of course fall upon them as an additional rate. It may also through financial adjustments be pushed off to posterity by the raising of a loan instead of immediate payment out of current levies. Hence, there is a tendency to a want of punitive severity in the scrutiny of little favours given to claimants whether among the producers or certain groups of consumers.

Eighthly, local authorities are often in a position to defend their undertaking against rivals, or against the demands of progressive consumers for improvements, or reduction of price, by non-commercial tactics and coercion. And there is a temptation on their part to do so. Pigou argues:

> "But, when any enterprise is operated by a public authority, it is likely to be maintained by artificial support, even though it is less efficient than its rivals. The reason is that persons in control of such an enterprise, being naturally anxious to make that enterprise a success, tend to identify the good of the whole with the good of their own department. Hence a Government authority embarked on a business is most certain, if it prove commercially weak, to employ unfair weapons from its non-commercial armoury, the use of which will maintain it more or less permanently in being, despite the fact that its productive methods are more costly than those of its rivals."

This can be done in either of two ways: defensively, by charging to other accounts what should be charged to the debit of the trading account (he mentions among other things the municipal advantages of superior credit); or aggressively by using municipal powers to obstruct and injure rivals. He mentions gas, electricity, and transport as examples of the latter, and draws attention to the possibility of a municipality so arranging its sinking fund, depreciation, and obsolescence as to tax present citizens for the benefit of posterity.[1]

There is, indeed, a strong temptation on the part of the local authority to make use of its relative monopoly of housing poor tenants by virtually denying to them the right of using the lighting or fuel which they would prefer. The Electricity Report by Political and Economic Planning (p. 53) indicts local gas authorities with arresting electricity development, by the refusal to allow the laying of mains, the canvassing of customers, and extension of supply to heating, cooking, and power, and their closing of housing estates to electricity altogether. But it is quite as often electricity which receives the benefit of discrimination as gas. Discrimination can be exercised by resolute and threatening forms of canvass, and by giving such an order of priority to possession of a new house that the prospective tenant who wants gas rather than electricity, or electricity rather than gas, or a coal copper rather than gas, is effectively kept out or coerced when in. The fact that local authorities with electricity undertakings used information obtained earlier than private companies and made restrictive agreements with tenants caused legislation to be passed designed to protect the tenant's freedom of choice Clause 12 of the Newport Act of 1930 (promoted by the Newport (Mon.) Gas Company) in which the former plea was embarked, runs:

---

[1] Op. cit., p. 392.

> "The corporation shall not make or impose under the powers of this section any term, condition, or restriction with respect to the form of light, heat, power, or energy to be used in any house, shop, office, warehouse, or other building, or on any lands, or with respect to the taking from any particular local authority, company, body, or person of any form of light, heat, power, or energy."

In 1932 the Kettering Gas Company obtained a similar power prohibiting the Kettering Urban District Council from imposing conditions on their tenants as to the form of light, heat, or power to be used by them. The Corporation owned an electrical undertaking.

In the course of discussion before the Select Committee on the Gas Light and Coke Company's Bill of 1933, it was alleged and proven that some local authorities, to prevent their tenants getting gas, used even to saw the gas pipes through and fill them up with liquid cement quite regardless of the possible danger from explosion! In 1934 the Gas Undertakings declared void any conditions imposing obligations or taking away rights in the event of the owner or occupier of premises taking a supply of gas, though permitting reasonable conditions regulating the position of fittings.

In 1936 the Gas Light and Coke Company, which has 1,400,000 consumers, asked for a Bill restraining the thirty-one local authorities who own electricity undertakings within its area of supply from undertaking restrictions. Its petition was wider than the terms of the Act of 1934, and the House of Commons Private Bill Committee found the preamble of the Bill proved without having fully heard all the petitioners against it. It enacted that housing authorities building, converting, or altering houses for letting or sale must allow the Company reasonable facilities for installing gas pipes and fittings. The authorities are protected to the extent that if they notify the Company of their plans and the Company does not within a month signify its intention to act it loses its opportunity.

It is evident that local authorities have only too well learnt what Adam Smith once called the "art of underling tradesmen." And it is not without a smile that one hears the complaints from the descendants of Victorian private monopolists who had to be controlled by Parliament, that local authorities are too smart in using their power to win customers. The will to win of the local authorities is worth applause. Yet, it must be emphatically declared that restraint through the stranglehold of housing powers does not assure that society's resources will be more economically invested than if left to a judgment founded only on the uncoerced economics of the fuel in competition. It is economically productive that local authorities shall be forced to compete, if there are competitors in the field. Nor is it a necessary part of the social service of an authority to restrict the tenants' choice on the plea that the design of the building is, (*a*) part of their sovereign power, and (*b*) that design must be more expensive where ventilation for gas, or higher rooms are required to offset its smirching quality.

Finally, in order to abate and re-direct these aberrant tendencies, it has been necessary to set up a system of checks and balances. Such a system includes a division of responsibility among the various agents. This tends to make for prolixity of counsel and slowness of decision, and the greater the number of agents involved—council, committees, officers, sub-committees, central departments and Parliamentary committees—the greater the opportunity for the intrusion of considerations which are not strictly relevant to a business decision. On this subject Pigou argues:[1]

> "When important decisions have to be taken there is a tradition of method in government offices that makes for delay, hesitancy, and immobility." But he admits two qualifications to this generalization. "In pure routine work this system may do no harm. . . ." And much of a long-established municipal enterprise is routine work; or the experience of other municipalities make it so. And much more importantly, when Pigou talks of enterprise in which quick decisions, prevision, and constructive speculation are necessary, he poses the reservation: "It is coming, however, more and more to be realized that the public operation of national undertakings does not necessarily imply that these undertakings are run by a Government department organized on Civil Service principles." He thinks of such special authorities as the Port of London Authority.

---

[1] Op. cit., pp. 388–90.

Indeed, the force of this argument, already weakened by the reservations which Pigou wisely admits, is almost entirely overcome by the close, local, immediate contact, between municipal council, committee, and consumers, as this loosens the stiffness usually present in Civil Service organization.

We have in a spirit of candour set out the possibilities of error, some of which are realized here and there throughout the country. Habitual and prejudiced critics of municipal administration ought to make a similarly frank survey of uneconomical tendencies in private business enterprise. It is especially important that attention should be fully paid to the ensuing discussion of the motives and incentives which counteract the forces just described. They effectively maintain the vigour, inventiveness, and enterprise of municipal enterprise in all save a few occasional cases.

III

Firstly, the professional officers, upon whom so much depends, have learnt a devotion to a particular science and technology. They exert themselves to master the inherent obstinacies of the coal, oil, gas, bacteria, combustion and generation plant, and the rest of the raw materials and instruments of their craft. These offer daily problems and challenges, and the technicians have been trained to make them productive to the community. They, of course, desire and demand the necessaries, comforts, and luxuries of life for themselves and their families, and if these are denied them below a certain standard they move to other jobs, or are discouraged from giving their best to their work. The education of the engineer or manager or assistant technical officers does not set up predatory ends—the service of the community, good work for its own sake, a first-rate job play a substantial part in their training. The relationship with their colleagues is not a competitive acquisitive one: it is vastly different from the egoism of business. Membership of their professional associations fosters devotion to a criterion of public service, and continually stimulates to an improved standard of knowledge and application. Consequently, they work with energy and capacity for the success of their enterprise. Their pride is also continuously involved, since the statistics are locally scanned, and may be the object of comment in the Press and at professional conferences. Promotion for them, also, in their own authority, and beyond to more important enterprises in other parts of the country, is a spur to effort. Pigou rightly observes:

> "In some matters of slight, but not negligible, importance experience suggests that the public authority has an advantage. This advantage is analogous to one found in productive co-operation. It is that, for a given sum of money, a more efficient engineer or manager can be obtained than will be forthcoming under private management, for the reason that the position of a public servant is at once attractive in itself, and also makes appeal to altruistic motives; or, alternatively, that an engineer or manager of given efficiency can be obtained for a smaller sum of money."[1]

Secondly, acting occasionally and always potentially as a control over their technical ability and good faith, are the consulting engineers and financial and legal experts, whose independent, expert examination is not infrequently called in by councillors when they suspect that existing practice could be improved. Here, another set of motives and dispositions comes into operation, with an integrity independent of both technical officials and the Council. Considerations of colleagueship and elections are equally alien to these consultant investigators, who have their reputation to maintain before the eyes of the whole profession. That reputation is not infrequently on trial under the cross-examination of Parliamentary Counsel during proceedings for and against private Bills, and any reputed shortcomings would be costly.

Thirdly, and, in part in connection with the preceding argument, it is not as though the secrets of enterprise were nowadays any longer locked in the breast of a Napoleon of industry.[2] Sooner or later, somebody in the Council or the community will discover from the general or technical Press or scientific proceedings, that changes could be made with advantage to the enterprise. If they are free to do so, by Parliamentary permission, some cities will begin to make experiments, and cities are jealously watched by their fellows.[3]

Fourthly, the councillors and the members of committee have the personal pride of successful management, economical administration, a flourishing town, and the desire, if possible, to extract a surplus for the benefit of the rates. It is useless to deny the strong force, the continuously operating force, of service to the municipality, rendered by the elected and unpaid representatives: the plain fact is that scores of thousands render this service. The motives in getting elected may be mixed. Self-importance, power, titles, a claim to have the municipal workman lift his cap in respect play a part, but do not seriously affect the main purpose: to advance the public welfare. Even if we allow for the defensive motive in the declarations made by municipal electrical undertakings in answer to the Government's *Outline of Proposals*, the basic sincerity of their argument cannot be altogether explained away. Thus, the Association of Smaller Electric Supply Undertakings refer to the retention of the "identity" of existing undertakings; the Urban District Councils Conference (June 1937) said, "Electricity supply should be purely for the service of the people. Were they satisfied that if electric supply goes into private hands, service would not go by the board and profit-making become the chief concern of the supply companies?" and the rest of the associations and individual authorities expressed themselves similarly—that public control and the interest of the public ought to be preserved. As to Pigou's observation[1] contrasting adversely the length of service of councillors with that of directors in private firms, a sufficient demonstration of municipal strength in this matter has been given in Chapter Nine.

---

[1] P. 387.

[2] Pigou (p. 397) quotes Mertz, *History of European Thought*, vol. i, p. 92, to the effect that the great recent inventions have been made not so much by industry as by the non-commercial scientific laboratory. Yet he maintains that their application requires a commercial stimulus. As we have shown there are stimuli as forcible.

[3] It is often in the interests of private enterprise to suppress beneficial inventions. Cf. *The Frustration of Science*, by Hall and others (George Allen & Unwin Ltd.).

We have acknowledged that there are many obstructive tendencies in the parochial outlook and resistances in local and personal ambitions. But they have their beneficial obverse. The Metropolis, embracing a multitude, has perhaps, no individual summons for each. For those who live outside the Metropolis their town is their world. Public significance is almost all of significance, and is registered by the opinion of the neighbourhood. The men and families are known; they rarely leave the town for another; their reputation over a number of years is dependent upon their work in the Council. Moreover, the committee-men want their department to excel others, and their city to surpass the achievements of their neighbours, and their undertakings to sell more cheaply and serve more gratifyingly than private undertakings. They keenly feel a setback. They certainly do not wish to show an adverse balance sheet, and still less to incur the opprobrium of asking for an appropriation from the rates to cancel a deficit.

---

[1] Op. cit., p. 388. Pigou appears to think that public operation is liable to be less efficient because the managing body is composed of members who "are elected for their political, rather than for their commercial, qualifications, and are also more liable than the directors of a company to lose their seats at short intervals."

Fifthly, within the municipal administration, department competes with department, managers and technical officials rival their counterparts in the other undertakings, and the treasurers and accountants keep watch, offering and sometimes imposing their views. The Town Clerks, although not managers of the city in the sense that the American City Managers are, frequently intervene as a matter of routine when the legal and administrative principles that seem to them appropriate are contravened. Sometimes they are commanded to investigate, or they take the initiative in securing the investigation of departments whose practices, for example, in not making proper contract forms for the supply of gas or electricity, are unsatisfactory.

In this internal tension and emulation there is much that fosters efficient management.

Sixthly, the administrative, clerical, and subordinate technical officials are animated by the chances of promotion, by the need to hold their job. It is true that the turnover of staff in private industry is much greater than in municipal enterprise, but it is not true that there is no movement at all in the latter. Still less is it true that the possibility of demotion, reprimand, and dismissal has no influence upon industriousness in local government. The staff are also stimulated by a sense of serving their town, and by a consciousness of what may be done when production and distribution are in public hands. The effect of this incentive need not be rated utopianly high, but it ought not to be underrated. Furthermore, the associations of these officials have fostered standards of knowledge and preparation for their duties, a degree of fairness to each other, and the free competition of talent by the destruction of the artificial barriers of nepotism and patronage which used to pertain in municipal employment and still pertains to a large degree in private business. The suggestion is sometimes made by those who have a predilection for private enterprise and its methods, that if the municipal undertakings were deliberately to attempt to secure the maximum profit possible from the exploitation of the undertakings, and to offer a share to their employees of the profits proportional to its magnitude, there would be more effort and enterprise. There is no doubt that there would be more activity, and certainly more reports, claims, and arguments. But would these be productive from the standpoint of the consumer? It is difficult to see how much the transport or water supply services could be improved by this device. As far as gas and electricity undertakings have experimented with the bonus, the result has not been entirely satisfactory. Sometimes damage has been done. Even private companies have preferred, after trial, a standard salary, on the condition that expected results shall be shown.

Finally, it must not be forgotten that the whole of the local system operates in the midst of constant and authorized publicity. The spirit and the constitution of municipal government is founded upon and thoroughly pervaded by publicity of action and explanation, and in the end by public judgment of the results. The enterprises as well as other local government services are at once the property and liability of the ratepayers both in the legal and political sense—of the whole body and not merely of the representatives of the majority for the time being.[1]

The law prescribes a minimum number of meetings a year, and though the public need not be admitted to Council meetings, in many cases they are. By the Admission of the Press to Meetings Act, 1908, representatives of newspapers, however, are entitled to attend all Council meetings, though not Committee meetings. Three days' notice must be given of Council meetings (Local Government Act, 1933, Schedule 3), and Standing Orders require similar notice of Committee meetings, together with specification of the business to be transacted. The law regulates the taking and confirmation of minutes, and any local government elector for the area is entitled, on payment of a fee of not more than one shilling, to inspect the minutes and to make copies or extracts, and may apparently exercise this right through a skilled agent. In the absence of malice, councillors and aldermen at Council or committee-men are exempt from liability for defamation: they are protected by a qualified privilege to speak their minds.[2] When the annual audit is complete, local authorities must print an abstract of their accounts which is to be open to the inspection of any local government elector for the area. Wherever district audit applies, the accounts and all the vouchers must be deposited at the appropriate office of the Council for seven days before the audit, and during that time any person interested, who so desires, must be permitted to inspect and take copies of them, and a ratepayer may appoint a professional expert to do this for him. There are provisions for due notice of the audit, and local government may appear and raise objections to items in the accounts.

---

[1] Cf. Lord Sankey in *Roberts* v. *Hopwood* (1925) A.C., p. 521.

[2] *Pittard* v. *Oliver* (1891), 1 Q.B. 474.

Thus, there are ways and means provided for the production of information and the challenge of actions by public opinion. It must be remembered that beside the ordinary consumer who feels that he has the right to complain, there are organized bodies who watch the Town Council's actions very narrowly, and *know their rights*. Moreover, local authorities actually feel that they have a responsibility for going to the public with information, even when it is not asked for. It is part of their electoral interest to do so, but it is also assumed as a civic obligation to educate the body of citizens to the sense of their own responsibilities. Indeed, every year there are reports of several actions for slander, threatened or actual, arising out of rumours or open charges of corrupt action or incompetence on the part of councillors or officials. There is no lack of criticism. It is not possible in municipal enterprise as it seems to be possible in company enterprise for the directorate to have hurried meetings at which the shareholders get no effective opportunity of protest. In municipal enterprise the heretic cannot be stifled: there are too many agencies ready to listen to him.

Hence there is a very complicated system of stimuli, and checks and balances, involving many diverse dispositions, from jealousy and envy to the highest scientific disinterestedness, from pure calculation of the pay per hour or per month and the comfort of office accommodation to loyalty to the public service. There are *a priori* ratiocinators who deny the force, the constancy, and even the existence of energies of this kind. Yet experience, leading to demonstrably successful enterprise, unmistakably asserts them.

Chapter Twenty-three

THE FACTORS OF SUCCESS AND THEIR DEVELOPMENT

THESE observations are not intended to recapitulate what has already been said, but to emphasize the factors which have made for municipal success and to suggest in what direction improvement and development should be sought.

With very few exceptions municipal undertakings in Great Britain are efficiently administered. The exceptions do not exactly or always coincide with size. There have been and there are large authorities which exemplify what should not be done, and there are small undertakings which are models of efficiency. The best municipal undertakings are at least as well administered as the most successful private concerns, whether under public control or not, and many stand very high indeed in the scale of business enterprise.

Some controversialists have made incentive the crucial test of their preference for private enterprise. We have shown, however, that the problem of incentive is not simple. It is rather a question of a number of psychological forces and institutional arrangements acting in conjunction, and this set of forces yields results different from those postulated by certain kinds of *a priori* argument.[1] Besides this local parallelogram of forces, we have to reckon with Parliament and the central departments. It may be possible to find fault with them in some details, but, on the whole, they are a powerful and indispensable influence for good through methods which are generally economical and administratively apt. Without this added factor of the central departments and the contribution made in Private Bill Committees, we would fear for the perennial quality of municipal enterprise in all but thirty or forty places. If, however, these factors of control and correction were absent the rest of the municipal undertakings would, no doubt, as the result of bitter experience, speedily erect central voluntary associations to assist them to successful enterprise. Where the central departments have been wanting is in the degree of their authority to compel backward local authorities. But this has been the result of parliamentary policy. The Board of Trade might, for example, have been much more forceful in promoting development of, and efficient administration in gas undertakings, the Ministry of Health, in water supply, and the Ministry of Transport and its predecessor in transport developments, if Parliament had devolved to them a wider field of jurisdiction and an intenser degree of authority and interest. These departments would then not merely have regulated but have spurred the local authorities on to fresh developments.

---

[1] We think chiefly of certain economists and city journalists who either think in strictly deductive terms or are the victims of prejudices impervious to experience. A particularly extreme example of vulgar prejudice may be cited. *Parliamentary Debates*, March 26, 1935 (on Glasgow Municipal Bank), Mr. (not then Sir) Herbert Williams: "As I do not like municipal trading and want it restricted within the narrowest limits [Hon. Members: 'Ah!'] Certainly. I do not think an unpaid body of directors, far too numerous—I have been a town councillor myself—is nearly as efficient at running a commercial enterprise as ordinary paid directors. Leaving out of account all the dangers of a municipal employe vote at election times, I say that as an administrative body a town council, excellent as it is for its normal functions, is not a very useful institution when it comes to running a business. The dice are loaded against it from the word 'Go.' Anyone who has served on a trading committee of a municipality knows that its efficiency right from the beginning is far lower than that of an ordinary commercial undertaking. . . . If a commercial enterprise fails, you can eliminate the incompetent directors, but when you nationalize a thing the real directorate remains, however incompetent it may be. It goes on, the incompetence is permanent, and you have not failure to enable you to eliminate incompetence. That is the real difference, and therefore I am opposed to this proposal. I see nothing in municipal trading to attract me, and I oppose it on every conceivable occasion."

Again, municipal and private undertakings are in common members of a large number of scientific and "pressure" associations. These keep the municipal authorities in touch with the latest contributions to knowledge in this country and abroad, and make inter-district and international comparisons of progress. It should not be believed that all that is to be learned is learned from private firms by municipal authorities. That is another suspicion which has descended from the days of the beginning of municipal enterprise; but for a considerable time it has ceased to be true. Indeed, very much of the exploration and spread of knowledge are accomplished by the technical officers, the salesmen and the chairmen of committees. The professional associations and those organizing the joint efforts of local authorities and trading committees promote alertness and enterprise by shaming the backward and public by applauding the path-breakers. The various associations themselves are in emulation and rivalry: each desires to excel the other in the estimation of the public. They seek a popularity based on their service and productivity. They are sometimes querulous when speaking about their associated colleagues in another branch or undertaking. In particular, the Institute of Municipal Treasurers and Accountants, the nearest approach to treasury brains and outlook in the municipal service, focuses and attempts to reconcile the technical interest and rivalries.

It may be rejoined that in the long run these forces are so much more uncertain than good plain robust economic incentive to make a personal profit. A century ago, that answer had to suffice. It was the doctrine and conviction of a hungrier and less wealthy world. Since then a hundred years of capitalist and about seventy of municipal enterprise have elapsed. In the light of this experience it is surely unreasonable to persist fully in the ancient dogmas? It is true that capitalist enterprise accomplished some remarkable feats. But it is also true that it caused remarkable harm. It shelved responsibility for the conservation of resources, for avoidance of the by-product of social waste like slums, the destruction of historic beauty, the physical stunting of three generations. It paid no special dividends to those hurt by arbitrary discipline and capricious dismissals. It was not mulcted in a penalty for under-exploitation of resources due to laziness, ignorance, ill-will, and family favouritism, nor for maldevelopment caused by dishonest production and marketing, nor for converting into a monopoly at the first possible moment the advantages acquired under free competition. Indeed, such occurrences or the well-founded fear of their imminence, caused Parliament, even in a capitalistic age, to intervene and control local monopoly. It was no arbitrary doctrine that alone caused intervention, but the thoroughly investigated and demonstrated harm that had been wrought. If a critic wished to argue that, after all, municipal enterprise is so good only by comparison with private enterprise when shackled by parliamentary and administrative controls, the answer must be that the country suffered when the latter was not controlled and would again if the controls were removed.

Therefore, municipal enterprise has justified the convictions of its founders. But its quality is not unconditional. Its quality depends on the maintenance of the present conditions of success and their improvement. These conditions we ought briefly to review.

(1) The ideal of serving as many consumers as possible for the maximum of their diverse demands at the lowest possible cost of production is kept steadfastly in mind. There is no harm, indeed there is some positive good in budgeting for a surplus, some of which may go in aid of rates, so long as competing services, for example, electricity and gas, are treated identically. The striving to secure a profit gives tone and severity to administration and sharpens the analysis of costs. The impetus of securing a small redistribution of

income in society by taking from the consumers of utilities to pay for the general social services, or the sheer interest in the development of those services, can act as an incentive to efficient conduct. Yet it would be a mistake for local authorities to concentrate attention on reductions in price, a policy which is a great temptation, and give but small regard to quality and service and amenities. Some local authorities still need to rid themselves of a monopoly outlook, that is, that a service is in existence in the possession of the authority, but that its development must await the spur of consumers' demands and complaints, and that what is given to the consumer is given *ex gratia.*

(2) Local authorities have steadily moved towards clarity and genuineness of accountancy. They know where they stand, what they owe, what they can afford, and what they ought to charge. So do any members of the public sufficiently interested to enquire. This process must be maintained and further developed. Local authorities must be candid with themselves, and entirely honest with their ratepayers. In the course of experience they have arrived at a comprehension of their intentions, economic and philanthropic, and it is important that they should be clearly perceived and steadily adhered to. Their administration will be soundest financially and most satisfactory to the consumer in the long run when there are no undisclosed subsidies whatsoever.

(3) The foregoing argument leads on to the beneficial results of the ability to make statistical comparisons between the results of one authority and another. There are, fortunately, units like car-miles, kWh, and therms and gallons of water which make this possible, It is true that there are variations of quality of the service, such as the purity and taste of water, but it must be accepted inevitably that these are as describable only in language and not in arithmetic. Statistical comparison is not likely to give perfectly convincing measurement, but its chief importance is to give shocks and therefore to raise questions, doubt, and self-criticism. Fundamental, of course, is public disclosure of the standard of quality adopted. Perhaps, in time, the comparisons themselves may become more minutely accurate. Some economists have thrown cold water on all public controls, and incidentally municipal management, because it excludes the possibility of accurate economic calculation.[1] The end of the enterprise is not entirely economic, it is argued, and therefore the product is not minutely and concretely measurable. No one can

---

[1] Cf. Ludwig von Mises, *Socialism*, trans. Kahane, 1936, Cape; and Barone and others, *Collective Economic Planning*, P. S. King and Son.

express exactly how much more or less capital, labour, and land, should or should not be directed along that particular line of production. Satisfaction is no longer measured in terms of money only, and therefore there is lost the possibility of comparing the price-cum-service relationship as between two or more independent and competing producers. Also, the latent threat of deserting the unsatisfactory producer in order to purchase from a rival is gone. There is considerable force in this argument. We may emphasize that the monopoly position of a local undertaking is derived not merely from the non-transferability of its services or goods and especially its fixed capital, but from the very high degree of non-transferability of the consumers. It would require, surely, more than a 10-per-cent increase on the price of your gas to make you move away to another district, and at that cost one might not be prepared even to move across the street. The ratepayers are, relatively speaking, a body of compulsory consumers.

However, this argument cannot be unqualifiedly accepted. As we have shown, there are many mitigations of the full rigour of the economic motive. Further, broad comparisons of a challenging value are possible between one local authority and another, and between local authorities and company undertakings. This was seen perspicuously by the McGowan Committee. Having proposed large electricity areas, this Committee said: "We believe that a more uniform and higher standard of progressive development might be maintained, (*a*) if there was a greater measure of consultation between the undertakers themselves in the different areas, and (*b*) if a competitive spirit could be fostered among the undertakings to a greater extent than exists at present. . . . We feel that it would tend considerably to inculcate a competitive spirit among the various undertakings if the commissioners were to obtain in public, on a quarterly basis, a limited number of the salient statistics which would be indicative of the growth of development on the part of the several undertakings. . . ."[1] At the margin, where inter-municipal comparisons cannot be made arithmetically, the municipal administrator may be consoled by the reflection that private enterprise also gropes and stumbles.

(4) The healthiest single factor of all has been direct democratic control. This has not been without its internal conflicts and aberrations. In the municipal sphere, however, its fundamental excellence does not admit of doubt. The permanent presence of the body of

---

[1] P. 42.

consumers; its authority and ability to make itself felt by the local authority and to invoke the good offices of the central departments; the paramount right of publicity—these have been administrative instruments unmatched in any other form of control.

It is to be hoped, therefore, that if any of these utilities are reorganized the device of the semi-public corporation will not be accepted, as it would oust full public control. German experience has amply demonstrated the weakness of that impotent hybrid to which incense was once burned—the "mixed undertaking." Designed to blend security for the public welfare with the initiative of business enterprise, it confused and frustrated both.[1] British experience with the B.B.C. and the L.P.T.B. are not such as to make us unconditionally sanguine that they ought to be copied in relation to other utilities; and, inherent in their form, are the high probabilities of future inability to do the best that can be done for the consumer. Such semi-public corporations were established after much theorizing in regard to (*a*) the need to avoid the routine and timidity of Civil Service administration, and (*b*) to secure the retention of public control. It is by no means certain, having regard to their experience, that their constitution and procedure secure these two ends beneficially to consumers and producers together, and make for the keenest degree of a sense of responsibility to satisfy the consumers. At any rate, a precipitate imitation of these models must be avoided.[2]

(5) Fear of political interference in the conduct of municipal undertakings has often been expressed. This can mean (*a*) that appointments and the management of personnel will be settled not by technical but by partisan or personal consideration, and (*b*) that contracts will be placed and prices manipulated to suit individuals or groups who have special means of illicit pressure. On the whole (*a*) has been favourably answered by experience, for practice is good and improving, and in the big undertaking it is so good that it might well be taken as a model by private enterprise with justice to the employees and advantage to profits and prices. There is more attention to merit, and more safeguards for its due reward in the selective processes of municipal undertakings than in those of private enterprise. As for (*b*), experience has shown that this cannot operate

---

[1] Cf. Batson, *The Price Policies of German Public Utility Undertakings*, 1933.

[2] Cf. Gordon, *The Public Corporation in Great Britain*, 1937; O'Brien, *British Experiments in Public Ownership and Control*, 1937 (George Allen & Unwin Ltd.); Robson and others, *Public Enterprise* (George Allen & Unwin Ltd.) and *The British Civil Servant* (George Allen & Unwin Ltd.), chapter by Herman Finer on "Personnel of the Public Corporations."

at all or can only operate with effect for a short time, because there are democratic safeguards, and the law strictly forbids discrimination in prices. There are many groups with conflicting aims and energetic advocates eager to denounce discrimination or favouritism, even if they do not exist. But Local Government Councils have regarded themselves as trustees for the whole community. Comparatively speaking, from the window of the town hall all men are equal. If a time comes when distribution by price to those alone who can afford to pay is entirely superseded by distribution according to need (which is an ideal energetically entertained by many, among them highly placed municipal organizers and technicians), the situation would be so different from what we know that its consideration is not called for here.

(6) Municipal undertakings have, on the whole, been capable routine administrators, and many have demonstrated a highly developed business capacity and power of innovation. It is true that the earliest experiments in supply were made by private firms, and that local governments no doubt profited by the lessons. But this was, in fact, of no very great significance, for the real initiator of enterprise in our day is the original inventor and his technical colleagues, while those who first took the financial risk were private business men simply because the law and constitution did not yet allow local authorities to proceed freely. Local authorities had to fight locally and in Parliament for the right to be enterprising. Had they possessed a freedom considered as inherent in Tom, Dick, and Harry, there would, for example, have been a very swift development of municipal motor transport in the 'twenties of this century. Moreover, it would have been enough for two or three local authorities to show the way, and it is hard to believe that such a number would not have begun local undertakings on a scale sufficient to test and recommend the possibilities to others. Technically and administratively, municipal enterprise has been as inventive at the very least as private industry. In the matter of pricing methods, the design of equipment and plant, of processes of manufacture and inter-research of new uses, the organization of service, municipal authorities have been keen and early experimenters. Private firms do not themselves, excepting in the giant units, conduct research. They subscribe to research associations or receive their knowledge from Government research stations or the university departments of technology. So do the municipalities. Experts in the largest authorities are actually inventors. It should not fail to be

noticed that their inventiveness is not a function of economic insecurity. The inventor cannot be produced by reward, nor extinguished by a reduction of salary. His attractions are apparatus, permission to test his ideas, and public acknowledgment. By invention, also, we mean not only the kind that is associated with test-tubes, retorts, and fatty acids, but devices for getting the best co-operative effort out of men and women to accomplish a common task.

Yet there is always room for improvement. These suggestions occur to us as possible without putting too great a strain on human nature.

(1) The present method of Private Bill procedure for obtaining novel powers should be retained, but it should be cheapened by taxing all the attendant costs at much lower rates than now. The House fees should be abolished or paid for by the Exchequer. Procedure should exclude the part now played by the House of Lords. Every five or seven years, when some local authorities have proved that the powers given have been well administered, there should be Enabling Bills to extend these powers to all local authorities of a comparable size and reputation, and render them able to adopt without more than the formality of a departmental order.

(2) The local meetings and polls, under the Borough Funds Acts, should be abolished, but the practice of local public enquiries retained and their procedure further developed.

(3) There should be further exploration of the possibility of clarifying and making more precise the accounts of the undertakings. In particular, there should be introduced costing analysis to the furthest point of its value. Many more figures are required in the localities and in the central departments. In particular, there should be considered the possibility of establishing and publishing the estimates of each authority's actual capital assets, and a comparative survey of the number of the staff in the different grades in each undertaking. The associations of local authorities and the Conjoint Conference of Public Utilities should participate in such clarification and in introducing a greater degree of uniformity in the returns made to the central departments. The returns of water (still in the main a private and grossly incomplete venture), electricity, gas, and transport, are now based on different principles, and the differences have little or nothing to do with the nature of the undertaking. Why the electricity returns should include wages and salaries, and the others not; why the tramway returns should include legal and parliamentary expenses and the others not; why some should

and others should not include classification by companies and local authorities is not discernible by the mere light of reason. It simply happens that no one has thought of the convenience and value of unification. Furthermore, they could with advantage and without disadvantage include further details.

(4) Following the precedent of the Local Government Act, 1929, which instituted periodical reviews of the General Exchequer Contribution (Block Grant) system, there should be established septennial reviews of the organization of each great undertaking by Royal Commissions or Departmental Committees. It is true that such investigations take place in the formative stages, or when the administration, nationally considered, has reached a critical juncture. It is true also that a mass of information pours into the central departments day after day. But what is wanted is a comprehensive and public examination. The evidence and the figures in support should be published verbatim, and the obscurantist practice of either not publishing (as in the McGowan Report) or of charging several pounds for the minutes of evidence, should be immediately reversed. It is difficult to see how, otherwise, in this gigantic complex society, there is to be an informed disinterested body of critics, if the evidence is not made accessible. We appreciate the need of promising confidence if certain information is to be obtained, but what of the public interests? The verbatim report of evidence in all cases before the Courts of Justice in which public utility undertakings, e.g. *Attorney-General* v. *Wimbledon* (1940), should be made available to the public in a convenient and cheap form.

(5) District audit should be made universal. Instead of being a department of the Ministry of Health, it and the Controller and Auditor's Department should be amalgamated in a great central court of accounts, quite independent of the Executive. The Ministry of Health or other central departments might be left merely the power to apply the penalties based on the courts, judgment, or to propose and administer reliefs suggested or ordered by the court, much as the Treasury now implements the administrative consequences of the Controller and Auditor-General's strictures in the form of minutes or regulations. Audit will have to become more specialized than it now is, although it is already specialized, and might well advise undertakings as to expediency while determining questions of legality. Nor ought the latter, while being just, assume a pettifogging character.

(6) A reorganization of areas is long overdue, and if this problem

were properly solved there would be an immense saving to the country without necessarily the loss of one iota of democratic control. In some cases such a reorganization would mean no more than the linking-up of existing areas with others for purposes of the sale of residuals, research advice regarding apparatus, staffing, and so on. In other cases, an extension of the area of some local authority would be involved. In other cases again, the problem could be settled by the taking or giving of bulk supply. In still other cases, where the authorities are demonstrably too small to give efficient service, the remedy lies in the formation of joint boards. In other cases, again, a division into smaller primary undertakings might be necessary. As we consider that the application of the constitutional principles of the semi-public corporation to local supply undertakings is not on all-fours with the functions of such bodies as the C.E.B., L.P.T.B., P.L.A., or the B.B.C., we think it a mistake, as in recent Government proposals, to suggest it. It seems to us, after contemplation of experience, that in the long run the impact of the consumer on the producers must be stifled by such a form of organization, which is based neither on the power of the individual to cease to purchase from, nor to elect or reject the producers. These public service boards are designed to be aloof from political considerations. Experience has shown that they are not. They are merely cut off from punishment by dissatisfied consumers. Hence we reject the idea of mixed boards with little or no elective contact with the consumer.

Though originally inclined to be suspicious of the system of joint boards of local authorities, on the grounds that progress might be held up by the need for getting unanimous consent of the constituent authorities, and also because they are undemocratic as the result of their indirect election, we now believe this to be the most desirable line of progress. At least, we think this approach to be better than (1) the retention of authorities which are too small, or (2) the establishment of mixed corporations, or (3) of administration by companies. We therefore suggest that progress should be along these lines. Joint operation should be made compulsory, the schemes being made within an appointed time by the local authorities and subject to the sanction which might modify or vary the proposals of the central departments. Companies which form small enclaves should be bought out by the municipalities. Where the companies are very large, or at any rate of a sufficient size, they should be allowed to continue operation under the system of public control as it now operates with any amendments which may be found necessary in the future. But the bias should be for local ownership and administration. This would mean that a number of *ad hoc* authorities would come into existence, cutting across other local authorities' areas. The evil of confusion would be the consequence, but this would have to be faced and as soon as possible overcome by a more comprehensive regional reorganization of local government. This regional scheme hangs together with the problem of the location of industry.[1]

As to the democratic argument involved, that is important; but enquiry has convinced us that the representatives on the joint bodies which now operate of the constituent local authorities are highly alert, dependent as they are on their own council, committees, and electorate. The democratic argument, however, does mean that the authorities of distribution as distinct from the generation of electricity, gas, and the catchment of water, must be small enough for complainants to get at the body of administrators quickly, conveniently, and unmistakably. The area must never get so large that the individual complainant or the local newspaper loses even abstract meaning either to fellow consumers on the further frontier of the supply area or to the central seat of administrative discussion and decision.

Over and above the areas of immediate supply there would need to be regional and national conferences, debate, research, schools of training, statistical measurement, organized selling schemes, perhaps recruitment of staff, and so forth. It will be observed that we have still left room for the continuance of some private enterprise, and we shall revert to this presently.

(7) Increased financial co-ordination is necessary. The Treasurer of the local authority should be given by law, and should occupy, the status of municipal economic adviser. This proposal is not intended to derogate from the sovereign power of the Council to override his advice. He is at all times and in every way to be the servant of the Council as hitherto. It is his relationship to the heads of the undertakings that requires restatement. If he is to occupy the position suggested, he needs much more thorough education in economic theory and organization than has so far been the case. The Town Clerk also needs to be selected primarily for administrative capacity.

---

[1] Yet neither the Report nor the Minutes of Evidence of the Royal Commission on the Location of the Industrial Population (1938–40) throws a clear light or offers guidance on this problem.

(8) Steadfast and determined attention must continue to be given to the selection of officials of all grades. Their probation ought to be far severer than it is at present, as much in their own ultimate interests as in that of the community. It must be remembered that the young people take up a particular career without knowing whether they will like it or whether they are really fit for the calls its demands make as they progress towards heavier responsibilities. It is necessary to appoint officials to assess the progress of the entrants, and those who are hopeless or second-rate should be told so as soon as possible. Those who prove that they have not only the brain, but the character and appetite for business enterprise should then be given a deliberately devised system of post-entry training to enable them to learn their job otherwise than by a long process of fumbling and error. A little iron injected into municipal administration does nobody any harm. Technical officials, as well as the administrative and clerical staffs, should be compelled to take some such course as that prescribed for the Diploma of Public Administration instituted at various universities. Such a Diploma course, including economic theory, history, and organization, political and social theory, the history of local government and public administration, cannot fail to reveal to those managing the undertakings their strengths, and also the weaknesses against which they must continually pit their determination.

(9) Should any further form of enterprise be assumed by local authorities? The most common suggestions are savings banks, the retailing of coal, milk supply, and the baking and sale of bread. The experience of Birmingham[1] has shown that certain large cities might be entrusted with the management of savings banks, and those of suitable size and administrative organization might be allowed to do this, if the safeguards proposed by the Institute of Municipal Treasurers were adopted. These are:

> "(*a*) The establishment of a municipal savings bank should not be regarded as having for its primary object the raising of money for municipal capital expenditure, but rather the provision of facilities for the exercise of thrift under the best and most remunerative conditions, with the same facilities to the local authority for making such use of a part of the accumulated funds as those suggested herein for trustee savings banks;
>
> (*b*) The municipal savings bank should be regarded as entitled to obtain within the range of trustee securities the best possible return on its investments;

---

[1] Cf. Hilton, *Britain's First Municipal Savings Bank*; Annual Accounts, Birmingham Bank, Reports in City Handbook, annually. Cf. also Parliamentary Debates, February 22, 1928.

> (*c*) That upon any funds lent to the corporation the bank, as the lender, should receive not less than the rate of interest being paid by the corporation to private lenders;
>
> (*d*) That there should be no indirect subsidy given to the bank in the form of free accommodation or service and that all beneficial users of buildings, staff, etc., be costed for inclusion in the working expenses of the bank;
>
> (*e*) That while the rate of interest allowed to the depositor need not be restricted to the same rate of interest as that payable on the Post Office or other savings banks, it should nevertheless be such as will leave a sufficient margin when deducted from the rate of interest earned by the deposited funds of the bank, to pay the working expenses when the bank has become properly established;
>
> (*f*) That notwithstanding the fact that the savings bank will have behind it the guarantee of the municipality, it will be necessary in investing the funds of the bank to follow the usual practice of other banks and exercise such care and caution in arranging investments as will ensure the bank carrying liquid assets sufficient to meet any emergency such as an unexpected run on the bank.
>
> (*g*) A municipal savings bank should, after a short period for getting into working order, be self-supporting. Any profit should be devoted in the first place to strengthening the financial position of the bank, and when that position is deemed to be sufficiently secure, it should be devoted either to the development of the business or to the improvement of the interest allowed to investors. It should not be devoted to relief of rates."

Any more far-reaching step in the matter of banking powers must be deferred until there is a more extensive reorganization for the whole country based upon a deep change in the credit institutions and investment agencies.

The municipal management of coal retailing has been twice recommended by Royal Commissions of Enquiry into the organization of the coal industry. The Royal Commission of 1925 said:[1]

> "There do exist between producer and consumer substantial margins of profit and expense which might be narrowed to the advantage of both of them. . . . Power to municipalities to engage in the trade, in competition, subject to the proviso that no charge should be allowed to fall on the rates, had in fact been approved by most members of the Commission of 1919. . . ." (the leading representative of the retailers) "thought that the retail merchants would have no difficulty in holding their own."

The Royal Commission accordingly recommended the grant of this power, *without the proviso regarding the charge on the rates:*

> "The control of the ratepayers would usually be sufficient to prevent the continuance of unsuccessful trading, but it might be advisable in

---

[1] Report, 1926, Cmd. 2600, p. 93.

> addition for intervention by the Ministry of Health or of the Scottish Board of Health, as the case may be, in necessary cases."

There is little that is so speculative about this form of enterprise that local authorities now managing more difficult forms could not administer successfully. The grades of coal are and can be well established. Official marketing schemes are already in control at the source; some authorities have already considerable local experience at selling coke. However, we cannot overlook the difficulty of the problem that will arise when the three forms of fuel—gas, electricity, and coal—come into the hands of a single selling authority. As we have seen, there are economic and therefore administrative problems of competition and co-ordination already, wherever two of these fuels are supplied by the same municipality.

There is no reason why, at any rate at the outset and for a long number of experimental years, local authorities should be given a monopoly of coal retailing. If they can, by unsubsidized and uncoercive competition, turn their rivals out of the field, they will acquire and pass on all the benefits of successful enterprise. The way should for long be open to new entrants into the trade. For in this undertaking the considerations which rule out competition in the local monopolies of electricity, gas, water, and transport do not apply.

Similarly with the distribution of milk and bread. It is not possible to make an overwhelming case in favour of the municipal sale of these commodities on the grounds of public health alone; for if Parliament willed it a municipal system of inspection could be administered to fulfil the object. Furthermore, in the case of bread there is a great deal to be said for leaving the choice to the consumer. There are many varieties of baking; and some further reason than health must be found for restricting the consumer's choice. It is possible that municipal bakeries, if they had the monopoly, would bake many varieties, but in that case they would lose some of the force of the argument that mass baking and delivery would reduce costs, which is an object of municipalization. There is a case for letting municipalities become bakers—it is rather a case of Why not?—but not for setting up a monopoly. *If* they can beat their rivals in the supply of a naturally diverse demand, let them do so.

As regards each of these commodities, coal, milk, and bread, there are two more things to be said. First, the Co-operative Societies, a workers' collective, democratically organized movement, already command a considerable proportion of the trade. Thus, they supply some 14 per cent of the nation's trade in coal, nearly 20 per cent of the liquid milk, and as to bread, "the co-operative society is often the largest bread distributor in its area and is in a position to decide bread prices."[1]

The Co-operative Movement is very much a working-class movement, and the bulk of its potential demand not yet satisfied could be met by the co-operative societies themselves with great advantage to their own administrative costs. There seems to be no reason why the local authorities could not do the job at least as well, and go beyond it to classes of the community who do not yet buy from them. Further, had the Rochdale Pioneers commenced their operations and evolved their ideal when municipal management had become feasible by reason of administrative reform, the extension of the franchise, and the experience of local monopolies, they might have chosen the municipality as the instrument of their collective enterprise. There is no reason why they should not have done so. However, the Co-operative Movement is now a great organized interest, and is not brimming over with enthusiasm for the transfer of trade and power to some other agency of collective welfare. This is evident from their reports on the subject,[2] and even more from the feeling which any suggestion of such change meets at their conferences, at which the present writer has sometimes sustained such propositions.

There can, to come to the second point, be only three grounds for changing the present situation: that local authorities will, quality for quality, do the job more cheaply, that they want practice for the day of socialism, that they can pursue a differential price policy, discriminating in their charges in favour of those with the smaller incomes—the path of workmen's fares, students' passes, rent rebates. Those local authorities who think they can be more efficient traders might be allowed to try, without monopoly powers. Those who want practice for the day of socialism would also get it in this way. It is true that nothing will be finally proved until there is a complete reorganization in which all trade, industry, commerce, wholesale and retail, come under a fundamentally new regime, in which the Co-operative Movement could not be exempt from adaptation. As for the policy of price-discrimination, it is possible to achieve its objects, namely the reduction of economic equality in other ways, by pensions, allowances, and so on, so that the poor might be able to buy from private or co-operative traders what they are now unable to afford. Under the present economic and political system this is possible only to a limited degree. It may be possible, in the future to extend the range of allowances, or directly affect prices through national marketing schemes, as in the case of milk. When, of course, the ideal involved comes to dominate the economic system, then nationally stated principles and standards will no doubt be implemented through the municipalities. Meanwhile, it is extremely difficult to describe by a term entirely lacking the flavour of contempt, the tactics of those parliamentary opponents of municipal trading who, eagerly prepared to put any imaginable restriction on the development of the Co-operative Movement, inform Parliament that it is in the interests of Co-operation that they are opponents of municipalization.

---

[1] Cf. Carr-Saunders and others, *Consumers' Co-operation in Great Britain*, pp. 109, 479, and 107 (George Allen & Unwin Ltd.), respectively for these estimates.

[2] Ibid., pp. 468–74.

(10) It is our settled conviction that a considerable proportion of the field of enterprise in any of the undertakings, which are or may become municipal, should be reserved to private enterprise, and here and there co-operative society trading. This must somehow be contrived. An important factor in the quality of municipal trading is the existence of company undertakings in the neighbourhood or in other parts of the country, whose results, expressed statistically and in other ways, are compared and contrasted with each other and with those of the municipalities. In such undertakings other stimuli to development are in operation, other incentives are being manifested and studied by onlookers. There are standards, free of municipal control and influence, and minds which are sharply independent, who know the inside veracities of analogous administrative ways and means, and who may therefore utter warnings and offer hints regarding the significance of efficiency reports. No single principle should ever be allowed to run unchallenged over the whole field of any human institution, whether State, local authority, or private business: political and administrative sanity is secreted in the combination and jostling of alternative principles. Hence, if municipal enterprise is taken as the orthodox basis, its own continued health will be maintainable only by the deliberate licensing of the heterodox, in ample areas reserved to them and chosen for their sample character.

(11) Finally, municipal trading is part of the whole field of local government. If it is extended, the significance of local government is enhanced; and it is believed that such enhancement extends and deepens the citizen's concern in the mechanism and process of government. Conversely, a transfer of power, let us say, to semi-

public corporations, may well reduce the number ot people willing to take part in public affairs. This consideration ought not to be omitted from any calculation of ultimate gain and loss in the question of the maintenance and extension of municipal enterprise. It might be to the higher advantage of the nation to concede—should it be necessary—a little in the efficiency of operation of municipal utilities, let us say in terms of the advantage to be obtained by the abolition of the smaller authorities, if thereby a keen public spirit could be maintained. It would be of greater advantage still if the appropriate technical changes could be accomplished with the ready good will of local councillors, officials, and electorates, so that the survival of the values of local self-government were abidingly compatible with the maximum efficiency of operation.

APPENDICES

MUNICIPAL TRADING SERVICES

TRADING RECEIPTS FOR CERTAIN YEARS

Undertakings	Trading receipts, in thousands of pounds							
	1910–11	1919–20	1924–25	1929–30	1933–34	1934–35	1935–36	1936–37
(i) *County Boroughs, Non-County Boroughs, and Urban Districts*								
Water	5,140	7,001	9,623	12,314	13,258	13,340	13,025	13,294
Gas	8,317	17,586	17,138	17,439	16,659	16,512	17,120	17,610
Electricity	4,508	13,836	20,063	28,044	35,771	38,127	41,406	45,342
Transport	6,648	15,817	18,104	22,501	21,680	21,989	22,341	23,161
TOTAL OF THE FOUR SERVICES ..	24,613	54,240	64,928	80,298	87,368	89,968	93,892	99,407
(ii) *County Boroughs*								
Water	3,502	4,997	6,927	8,427	9,065	9,056	9,126	9,226
Gas	5,929	13,153	12,226	12,422	11,697	11,576	12,079	12,426
Electricity	3,277	10,883	15,173	20,547	25,541	26,954	29,127	31,829
Transport	6,036	14,578	16,709	20,648	20,175	20,402	20,913	21,680
TOTAL OF THE FOUR SERVICES ..	18,744	43,611	51,035	62,044	66,478	67,988	71,245	75,161

(III) *Non-County Boroughs*

Water	955	1,080	1,512	1,958	2,154	2,219	2,139	2,248
Gas	1,384	2,450	2,713	2,704	2,754	2,852	2,966	3,077
Electricity	830	1,722	2,928	4,860	7,669	8,457	9,490	10,555
Transport	384	607	915	1,321	1,210	1,326	1,220	1,280
TOTAL OF THE FOUR SERVICES	3,553	5,859	8,068	10,843	13,787	14,854	15,815	17,160

(iv) *Urban Districts*

Water	683	924	1,184	1,929	2,039	2,065	1,760	1,820
Gas	1,004	1,983	2,199	2,313	2,208	2,084	2,075	2,107
Electricity	401	1,231	1,962	2,637	2,561	2,716	2,789	2,958
Transport	228	632	480	532	295	261	208	201
TOTAL OF THE FOUR SERVICES	2,316	4,770	5,825	7,411	7,103	7,126	6,832	7,086

SOURCE: Annual Local Taxation Returns.

MUNICIPAL TRAM AND TROLLEY-BUS SERVICES

AVERAGE FARES PER MILE

CERTAIN TOWNS, 1935–36

Authority	Tram fares per mile		Trolley fares per mile	
	Ordinary	Workman's	Ordinary	Workman's
	d.	d.	d.	d.
Ashton-under-Lyne	1·10	0·65	1·20	0·56
Birmingham	0·65	0·50	0·72	0·50
Bradford	0·85	0·47	0·90	0·49
Bury	1·11	0·61	—	—
Darwen	1·45	0·62	—	—
Doncaster	0·60	0·30	0·80	0·40
Dover	1·00	0·50	—	—
Grimsby	0·93	0·67	0·98	0·70
Halifax	1·02	0·51	—	—
Leeds	0·66	0·47	—	—
Leicester	1·08	0·59	—	—
Manchester	0·73	0·50	—	—
Newcastle	—	—	0·67	0·38
Nottingham	0·89	0·54	0·81	0·53
Sheffield	0·40	—	—	—
Wolverhampton	—	—	1·05	0·60

MUNICIPAL WATER UNDERTAKINGS

CAPITAL CHARGES AS A PERCENTAGE OF TOTAL COSTS OF PRODUCTION FOR CERTAIN AUTHORITIES, 1934–35

Authority	Capital charges		Working costs	Capital charges as a percentage of total costs
	Interest	Sinking funds and repayments		
	£	£	£	Per cent
Birmingham	331,090	174,812	438,666	54
Leeds	100,272	114,037	176,961	55
Liverpool	255,313	50,284	295,551	51
Nottingham	47,479	42,522	211,025	30
Doncaster	13,129	11,660	28,218	47
Guildford	9,495	Nil	12,413	43
Lincoln	7,999	3,758	23,642	33
Shrewsbury	3,052	2,486	8,475	40
Stafford	575	1,120	8,089	17
Bexhill	9,108	2,404	18,090	39
Leek	1,043	Nil	3,113	25

SOURCE: *British Waterworks Directory*.

MUNICIPAL GAS UNDERTAKINGS

CAPITAL CHARGES AS A PERCENTAGE OF TOTAL COSTS OF PRODUCTION FOR CERTAIN AUTHORITIES, 1935–36

Authority	Capital charges		Working costs	Capital charges as a percentage of total costs
	Interest	Sinking funds and repayments		
	£	£	£	Per cent
Birmingham	126,058	159,183	2,129,290	12
Bradford	20,402	11,253	399,205	7
Leeds	18,472	44,329	564,092	10
Nottingham	31,461	15,689	389,866	11
Bury	2,609	6,897	99,184	9
Carlisle	7,090	15,824	86,485	21
Darlington	1,871	4,784	94,544	7
Doncaster	5,500	11,227	88,938	15
Batley	3,754	4,465	29,454	22
Darwen	2,350	2,232	29,243	13
Macclesfield	640	1,660	43,316	5
Neath	2,511	6,834	41,167	18
Bexhill	8,404	4,655	40,935	24
Goole	1,200	2,975	24,444	14
Hereford	1,913	6,897	42,295	17
Pontefract	1,710	3,308	15,864	24
Abertillery	329	1,510	18,965	9
Pontypridd	2,016	3,103	22,677	18
Skegness	3,358	4,483	16,471	33
Coalville	680	2,076	15,644	15
Leek	3,863	3,920	29,564	21

SOURCE: Gas Returns.

MUNICIPAL ELECTRICITY UNDERTAKINGS

CAPITAL CHARGES AS A PERCENTAGE OF TOTAL COSTS OF PRODUCTION FOR CERTAIN AUTHORITIES, 1935–36

Authority	Capital charges		Working costs	Capital charges as a percentage of total costs
	Interest	Sinking funds and repayments		
	£	£	£	Per cent
Birmingham	398,625	452,236	1,364,019	38
Bradford	98,500	140,848	401,086	37
Leeds	139,793	234,185	507,648	42
Liverpool	420,507	279,234	855,842	45
Nottingham	119,068	184,295	364,810	35
Doncaster	13,424	21,556	55,649	38
Guildford	19,055	21,757	44,271	41
Hastings	36,905	48,888	119,983	43
Lincoln	16,547	29,962	67,545	40
Lowestoft	6,528	9,672	40,245	29
King's Lynn	1,843	16,525	21,957	45
Shrewsbury	2,680	5,507	17,559	32
Stafford	4,132	5,040	40,454	19
Bangor	3,895	6,032	12,894	43
Canterbury	3,191	6,825	22,051	31
Maidenhead	2,820	3,344	31,504	17
Cleethorpes	3,214	4,769	14,630	35
Bridgend	2,776	3,604	13,378	32

SOURCE: Electricity Supply.

MUNICIPAL TRAMWAY UNDERTAKINGS

CAPITAL CHARGES AS A PERCENTAGE OF TOTAL COSTS OF THE UNDERTAKING FOR CERTAIN AUTHORITIES, 1935–36

Authority	Capital charges		Working costs	Capital charges as a percentage of total costs
	Interest	Sinking funds and repayments		
	£	£	£	Per cent
Birmingham	52,040	104,927	893,768	15
Bradford	16,570	56,262	275,314	21
Leeds	36,466	73,394	615,201	15
Liverpool	61,088	57,672	1,156,734	9
Nottingham	4,881	23,680	56,792	35
Bury	2,609	9,805	24,874	33
Blackpool	25,257	51,587	215,936	25
Grimsby	4,920	5,109	19,426	34

SOURCE: Return Relating to Tramways and Light Railways.

INDEX

Accounts, 101 ff, 407, 411
Acquisition of Land, 123 ff
Acquisition of Powers, 69
Administrative Control, Central, 82
Administrative organization, 163 ff
Advisory Committees, Water Supply, 236, 245
Alban and Lamb, 80 n, 374
Amortization periods, 135
Areas, Undertakings, 76 ff, 231 ff (and Contents), 413
Ashton-under-Lyne, 81
Associations, Municipal, 97, 101, 102 n, 111, 117, 130, 136 n, 181 n, 188 n, 195, 202 ff, 207, 238, 272, 303, 405
Attorney-General v. *Oldham*, 147 n
Attorney-General v. *Wimbledon*, 339
Audit, 80, 104 ff, 412

Baker, A. C., 92, 357
Barnsley, 17, 30, 171, 253
Barrow-in-Furness, 81
Barry, 345
Basingstoke, 81
Benham, Dr., 26 n
Bird, C. H., 122 n
Birkenhead, 176, 212
Birmingham, 49, 50, 81, 115, 116, 122, 124, 146, 153, 209, 382, 385, 386
Board of Trade, 25 n, 310 ff, 317
Booth, Wilton, 80 n
Borough Funds Act (1903), 73
Borrowing Powers, 142 ff
Bournemouth, 281
Bradford, 374, 388
Bristol, 92, 126
British Commercial Gas Association, 388
British Electrical Development Association, 188, 207, 288
British Waterworks Association, 81, 102 n, 240 n, 374, 375
Brownhill, 91
Bunce, Mr., 50
Burnley, 81, 158, 175 n, 178 n, 289
Bury, 120, 321
Bury St. Edmunds, 95

Capital costs, 233, 424 ff
Capital expenditure, 193
Catchment areas, 233
Central Advisory Water Committee, 236, 242
Central Electricity Board, 261 ff, 349
Central purchasing, 121 ff
Chadwick, Edwin, 41
Chairmen of Committees, 179 ff
Chamberlain, J., 50
Chantler, Mr., 29 n
Charges for municipal services, 301 ff
Chesterfield, 81, 110 ff, 124 n, 386
Clark, Mr., 26 n
Clifford, Mr., 40
Coal consumption, 117 n
Coke-oven gas, 254
Collins, A., 99, 172, 192, 289, 317
Colwyn Bay, 301
Committees and Commissions (and Reports)—
  Health of Towns (1842 and 1844), 39 n, 41
  Metropolitan Gas Supply (1859), 46 ff
  Electric Lighting Bill (1882), 56
  Municipal Trading (1900), 59 ff
  Municipal Trading (1903), 61, 101 n, 105
  Accounts Local Authorities, 109
  Repayment of Loans (1909), 144
  Water Supply (1910), 234
  Water Power Resources (1921), 21, 234
  Electricity Supply (Weir, 1926), 260
  Fuel and Power (1928), 17 n, 255 n
  Industry and Trade (Balfour, 1928), 96, 301
  Transport (1931), 283, 305
  Local Government Expenditure (Ray, 1932), 106
  Standardization of Requirements (Central Purchasing, 1934), 121
  Inland Water Survey (1935), 245
  Area Gas Supply, 328
  Electricity Distribution (McGowan, 1936), 17 n, 189, 265
  Private Bill Legislation (1937), 69, 71
  Gas Prices (1937), 17 n, 99, 300, 317
Committees Trading Services, 166 ff, 172 ff
Competition, restricted, 29, 47 ff
Consultant experts, 399
Contracts, 113 ff
Co-operative Movement, 417 ff
Co-ordination, 183 ff, 414
Corruption, 215 ff
Costing, 102, 407
Cost of production analysis, 99 ff
Costs, overhead, 99 n
Council meetings, 402
Councillors, 163 ff, 400
Coventry, 100, 186, 355, 388
Coxall, Mr., 101 n, 110
Craven, Mr., 100 n
Croydon, 164, 195 n

Debt, municipal, 20
Deficiencies, undertakings, 19, 25
Democratic control, 408
Depreciation, 133 ff
Derby, 281
Derwent Water Board, 240
Dewsbury, 81
District Audit, 80, 82, 412
Dover, 94
Drummond and Marshall, 143
Dundee, 203 n

Eastbourne, 109 n
East Ham, 151
"Economies of Scale," 300
Edinburgh, 116, 120, 185
Efficiency of Undertakings, 32, 392 ff, 407
Elections, local, 164
Electrical Association for Women, 387
Electricity Lighting Acts, 56, 57
Electricity and Gas co-ordination, 184 ff

Electricity—
  charges, 267
  charges (prices, tariffs), 303, 331 ff
  Commissioners, 25, 77, 82, 90, 108, 128, 136, 159, 188, 259 ff, 262, 269, 311, 333 n
  development, 23, 53 ff, 138
  development circles, 387
  "Grid," 262
  investigations, 258
  Joint Authorities, 261, 275 ff
  load factor, 263, 265
  London and Home Counties District, 266
  meters, 311
  meter reading costs, 316, 333
  Regions, 262
  reorganization proposals, 269 ff
  rival supplies, 274, 346 ff
  size and efficiency, 267 ff
  Supply Acts, 108, 128, 138, 150, 259, 331
  undertakings, number of, 258, 267
  uses, 316, 333
  wiring and apparatus, 345
Employees—
  and electorate, 164
  conditions, etc , 198 ff
  numbers, 26
  training, 415
Engineer, Electrical or Gas (*see* Manager)
Enterprise, quality of municipal, 96 ff
Establishment charges, 109 ff
Expenditure trading services, totals, 19, 26
Expenditure per head, 364
Expenses, Private Bills, 70 ff

Fair Wages Clause, 225
Fearnley, R. A., 355 n
Finance Committees, 192 ff
Finance Department, 194 ff
Financial basis, trading, 78 ff
Financial Officer (*see* Treasurer)
Foden, W. E., 138, 152, 350 n
Fowler, R. F., 137
Fuel Conference, World, 256
Fuel Research Board, 310

Garcke, Mr., 25 n, 58
Gas—
  charges (prices, tariffs), 305, 309 ff
  coke-ovens, 254 ff
  competition of fuels, 314
  consumers, 24
  development associations, 386
  employees in, 26
  "Grid," 254
  Light & Coke Co., 396
  load factor, 317
  Manchester, 37 ff, 254
  manufacturing and distribution costs, 252
  meters, 311, 321
  meter reading costs, 306
  Metropolis, 45
  Municipal supply, 46
  referees and examiners, 310
  residuals, 252, 318, 328
  restrictions on use of, 396
  size and efficiency, 251 ff
  supply in bulk, 250
Gas (*continued*)—
  thermal unit, 309
  transfer of undertakings, 254
  undertakings, numbers of, 24
  uses of, 315
Gas and Electricity co-ordination, 184 ff
Gas and Water Facilities Act, 49
Gasworks Clauses Act, 46
Gateshead, 89
Glasgow, 57, 60, 404 n
Goodenough, Sir F., 384
Greenwood, A., 121
"Grid"—
  Electricity, 262
  Gas, 254
  Water, 249

Hadfield, Mr., 103
Halifax, 291, 322
Haynes, J. T., 314 n, 327
Hill, L., 208 n
History, municipal trading, 36 ff
Hopkins, C. A., 352
House of Lords, 73, 74, 90, 128, 235, 240, 331
Huddersfield, 52, 291
Hull, 102, 123, 136, 152, 206 n, 386
Huntsman, E., 181, 195

Incentives to efficiency, 391 ff
Income Tax, 80, 158
Imrie, J. D., 304
Irregularities, accounts, 107

Jackson, A. A., 360
Jennings, I., Dr., 84, 142
Joint Boards, 413
Joint Electricity Authorities, 275 ff
Joint Industrial Councils (*see* Whitley Councils)
Joint Transport Boards, 288 ff
Joint Water Boards, 239 ff

Keighley, 293
Kettering, 396
Knight, Prof., 98
Knoop, D. N., Prof., 17 n, 31 n, 34

Lamb, H. C., 97 n, 182, 204 n
Lancs and Cheshire employees, 208
Land Purchases, 122 ff
Larkin, S., 188, 269 n, 327 n
Leeds, 60, 119, 281, 321, 377, 387
Legal framework, Chap. 4
Leicester, 52, 116, 174, 193 n, 323, 384
Liberty and Property Defence League, 58
Liverpool, 90, 290
Load factor, 262 ff, 265, 315
Loan indebtedness, 20, 128 ff, 424 ff
Loan repayment and amortization, 134 ff, 143
Local Authorities Enabling Bills, 62 ff
Local monopolies, 28 ff
Long and Maxwell, 143
Loughborough, 187
Luton, 96
Lymm Gas Order, 148

Macclesfield, 322
Managers, undertakings, 175 ff, 186, 301, 401

Manchester, 22, 37, 91, 93, 186, 254, 279, 280
Mansfield, 89, 173
Marshall, A. H., Dr., 113
Marylebone, 128
McGlusky, 319, 323
Merthyr Tydfil, 91
Meter reading costs, 306, 307
Metropolitan Water Supply, 43
Michael and Wells, 44 n, 127, 44 n, 148 n, 311 n
Middlesbrough, 323, 352
Ministry of Health, 82, 89, 90, 102, 104 n, 123, 136, 141, 144, 145, 159, 207 n, 235, 243, 247, 366
Ministry of Transport, 82, 135, 333, 334
Model Bills, 73
Monkhouse, Councillor, 102
Mossley, 95
Motor Buses (*see* Transport)
Municipal Trading—
  Accounts, 101 ff, 407, 411
  administrative organization, 163 ff
  analysis of costs, 99 ff
  areas, 76 ff, 231 ff, 413
  arguments favouring, 28–31, 58 ff
  audit, 80, 104 ff, 412
  bakeries, 65
  borrowing, 142 ff
  central control, 82 ff
  co-operative movement, 417 ff
  corruption, 215 ff
  councillors, 163 ff, 400
  debt (*see* Loans)
  degeneration, 133 ff
  democratic control, 408
  deterrents, 391 ff
  efficiency and size, 231–2
  efficiency investigations, 412
  electorate, 164
  employees of, 26, 198 ff, 415
  Enabling Bills, 62 ff
  expenditure (*see* Tables)
  expense of Bills, 70 ff
  extension of, 415 ff
  financial basis, 78 ff
  history, 36 ff
  incentives, 391 ff
  inception of schemes, 89 ff
  Income Tax, 80
  inventiveness, 399, 410
  irregularities, 107, 262 ff, 265, 315
  land purchases, 122 ff
  legal framework, Chap. 4
  load factor, 262 ff, 265, 315
  loans, 20, 128 ff, 132 ff, 424
  managers, 175 ff, 186, 301, 401
  manual workers, 200 ff, 211, 218 ff
  measurement of efficiency, 31 ff
  monopolies, local, 28 ff
  "monopoly-minded," 393
  nature of, 27 ff
  non-transferable services, 29
  overhead costs, 99 ff
  personnel, 198 ff, 216 ff
  powers definition, 78 ff
  price discrimination, 299, 307, 320, 337
  price rings, 115
  Private Bills, 68–74
  profit motive, 30
Municipal Trading (*continued*)—
  profits and losses, 158
  pros and cons, 58 ff
  Provisional Orders, 49, 79
  purchasing, 112 ff
  rate aid, 147 ff
  reserve funds, 79, 138 ff
  restrictions, competition, 396
  returns, 81, 82
  salaries, 204 ff, 210, 216
  secret commissions, 215
  select committees, 59 ff, 61, 101 n, 105
  service and sales, 382 f
  special orders, 75
  Tables relating to (*see* Tables)
  theories of, 27 ff, 58 ff
  valuation of undertakings, 125 ff
  wages, 218 ff

N.A.L.G.O., 208 ff
National Civic Federation Report (1907), 46 ff, 51 n
National Gas Council, 188, 207, 313
National Physical Laboratory, 118
N.U.C.O., 208
N.U.G.M.W , 208
N.U.P.E., 208
Nettleton, A., 130
Newcastle, 282
Nicholson, R. G., 102 n
Non-transferability of service, 29
Norwich, 173
Nottingham, 118, 173 n, 181, 195, 384

Oldham, 147, 321
Ossett, 23
Overhead costs, 99 n
Oxford, 74, 128

Page, Mr., 122
Paine, Mr., 320 n
Partington, 91, 254
Payments, 196
Personnel, 198 ff, 216 ff
Pigou, Prof., 31 n, 392, 394, 395, 397, 399
Plymouth, 135, 186
Police Commissioners, 37 ff
Political and Economic Planning, 252 n, 268, 315, 395
Ponsonby, G. J., 137
Pooling, loans, 143
Poplar, 117
Porter, S., 204 n
Powers, grant of, 78
Price rings, 115 ff
Pricing, theory, 299–307, 406
Private Bills, 68–74
Profit motive, 30
Profits and losses, 158
Provisional Orders, 49, 79
Public Administration, 122 n, 232 n, 304 n
Public Health Acts, 44, 49
Public lighting, 315
Public utility corporations, 413
Public Works Loan Commissioners, 142
Publicity, Council proceedings, 402
Purchase of land, 122

Rate-aid, 80, 146 ff
Rawtenstall, 81

Receipts and payments, 196
Redford, Prof., 39 n
Relinquishment of undertakings, 94
Repayment of loans, 133 ff, 143
Reserve funds, 79, 138 ff
Responsibility of councillors, 97
Restrictions by local authorities, 396
Returns, Gas, Electricity, Water, Transport, 81, 82
Rhyl, 90
Road Traffic Act, 225, 285, 302
Roberts, A. Carson, 107, 136, 137, 153
Robertson, Mr., 126 n
Robinson, G. E., 84
Rotherham, 102, 120, 327, 387
Rothwell Gas Order, 148 ff

Salaries, 204 ff, 210, 216
Sales, 382 ff
Salesmen, 206
Salford, 120, 185, 386, 387
Scottish local authorities, 158 n
Secret Commissions, 215
Service and sales, 382 ff
Shaw, G. B., 60 n
Sheffield (gas grid), 17, 253, 255
Sheffield (transport), 292
Showrooms, 385 ff
Shrewsbury, 95
Silvers, C. O., 150, 353
Simon, E. D., Sir, 66, 67, 357
Simon, Lady, 21 n, 38 n
Size and efficiency, 231–2
Smethwick, 384
Snowden, P., 61
Southend, 95
Southport, 164, 175, 193 n
Special Orders, 75
Stalybridge, 288
Statutory authorities, 37 ff
Stockport, 234
Stockton-on-Tees, 81
Stoke-on-Trent, 22 n, 342, 384
Studholme, 311 n
Superannuation Acts, 210 n, 227
Supplies, purchase, 113 ff
Supplies (testing), 117 ff
Surpluses, disposal, 146 ff
Suthers, R. B., 61 n

TABLES—
  Trading Services Expenditure Revenue Account, 1936 and 1937...19
  Expenditure Trading Development, 1885–1937...20
  Indebtedness Trading Development, 1885–1937...20
  Indebtedness Trading Outstanding, 1936–37...25
  Development Water Consumption—
    Manchester, 21
    Ossett, 23
    Southport and District, 22
    Wakefield, 22
  Municipal Water Supply, Assumption since 1840...41
  Municipal Gas Supply, Assumption since 1840, 46
  Municipal Gas Supply, Sales and Consumers since 1885...51

TABLES (*continued*)—
  Municipal Tramways, etc., Assumption since 1876...53
  Municipal Tramways, etc., the Miles and Passengers since 1885...54
  Municipal Trolley Bus, Miles and Passengers since 1913–14...55
  Municipal Petrol Bus—
    Miles and Passengers, 1920–28...55
    Miles and Passengers, 1921–36...55
  Municipal Electricity Services Sales and Consumers, 1901–38...58
  Rates and Income Tax on Certain Municipal Undertakings, 81
  Coal Consumption in Gas Manufacturing, 1937–38...117
  Loan Charges on Undertakings, 132, 424–27
  Loans Debt and Reserves, 1909–37...139–40
  Rate Aid and Electricity Sales, 151
  Rate Aid and Gas Sales, 151
  Rate Aid and Deficiency Trend, 1919–37...154–57
  Municipal Employees and Electorate, 164
  Personnel of Undertakings by Classes, 198–200
  Proportion of Salaries, Wages to Working Expenses, 200–202
  Salaries of Managers of Engineers, 204–205
  Sample Clerical and Administration Salaries, 216
  Permanent and Temporary Staff, 227
  Supplies of Water in Bulk, 243, 244
  Size and Efficiency of Gas Undertakings, 251
  Coke Sales and Total Gas Revenues, 252
  Coke-oven Gas, 255
  Electricity Undertakings—
    Number of, and Units Sold, 1924–25...259
    Number of and Units Sold, 1937–38...267
    Load Factor, 1935–36...265
    Distribution Costs and Size of Undertaking, 1937...270–71
  Tramway Mileage under Running Powers, 279
  Trolley Bus Mileage under Running Powers, 279
  Road Traffic Applications for Consent, 285
  Proportions of Fares Carried in the Three Forms of Municipal Transport, 288
  Uses of Gas by Consumers, 315
  Uses of Electricity by Consumers, 316
  Amounts Realized for Gas and Residuals, 318
  Public Lighting in Various Towns, 326
  Sales of Electricity According to Use, 333
  Electricity Sales for Public Lighting and Traction, 343
  Public Lighting by Electricity Development, 1922–38...343
  Cost of Current and Rate Aid to Municipal Transport, 344
  Workmen's Fares, 353

- **Tables** (*continued*)—
  - Sales of Water—
    - Domestic and Measured with Prices, 368
    - with Miles of Mains and Prices, 372
  - Municipal Trading Receipts for Certain Years, 1910–11 to 1936–37...422–23
  - Fares per Mile, Trams and Trolley Buses, 424
- Taf Fechan, 91
- Tariffs, undertakings, 301 ff (*see* Charges)
- *Times, The*, 60
- Trading services—
  - (development), 20
  - expenditures, 18 ff
- Traffic Commissions, 285, 361
- Tramway Returns, 25 n
- Tramways Act, 1870...24, 125
- Tramways, 282 ff
- Transfer of undertakings, 94 ff
- Transport—
  - areas, 279
  - extent of undertakings, 25
  - fares, 301, 352
  - fixed costs, 350
  - housing estates, 356 ff
  - inter-running arrangements, 280
  - Joint Boards, 288 ff
  - motor buses, 284 ff
  - passenger journeys, 25
  - "peak load," 283 ff
  - protected fares, 361
  - Royal Commission, 283
  - service, 360
  - trolley buses, 17, 92, 286 ff
  - Tyneside, 281
  - workmen's fares, 352
- Transport and General Workers, 301 ff
- Treasurer, Municipal, 141, 194 ff, 414
- Tynemouth, 44

- Unit costs, 102, 407

- Valuation of undertakings, 125 ff

- Wages, 218 ff
- Wakefield, 22
- Wallasey, 120, 187
- Water—
  - amount per head analysed, 376
  - authorities number, 24
  - bulk supply, 242, 369
  - charges, 303, 364 ff
  - consumption of, 20 ff, 374, 382
  - "Grid," 249
  - Joint Boards, 239 ff
  - Metropolitan supply, 43
  - municipal consumption, 375
  - "pure and wholesome," 366
  - rural supplies, 239
  - statutory basis, charge, 365 ff
  - waste, 374
- Waterworks Clauses Acts, 44
- Webb, S. and B., 36 n
- Webb, Sidney, 58 n
- West Ham, 385
- Westlake, C. R., 232
- West Midland J.E.A., 95 117
- Whitley Councils, 207 ff, 218 ff
- Widnes, 81
- Wigan, 98 n, 281
- Williams, Sir H., 404 n
- Wills, 331, 365 n
- Wimbledon, 203 n, 331
- Wolverhampton, 152

- York, 293

GEORGE ALLEN & UNWIN LIMITED
PUBLISHERS LONDON
RUSKIN HOUSE

GEORGE ALLEN & UNWIN LTD
LONDON: 40 MUSEUM STREET, W.C.1
CAPE TOWN: 73 ST. GEORGE'S STREET
TORONTO: 91 WELLINGTON STREET WEST
BOMBAY: 15 GRAHAM ROAD, BALLARD ESTATE
WELLINGTON, N.Z.: 8 KINGS CRESCENT, LOWER HUTT
SYDNEY, N.S.W.: AUSTRALIA HOUSE, WYNYARD SQUARE